AD-A102 352 ENVIRONMENT CONSULTANTS INC DALLAS TX F/G 13/2
CULTURAL RESOURCES OVERVIEW OF THE PROPOSED BLACK CYPRESS AND M--ETC(U)
JUL 81 M J NORTHERN, B D SKILES DACW63-80-D-0139
UNCLASSIFIED CRR-81-11 NL

1 OF 1
AD A
102352

END
DATE FILMED
8-81
DTIC

CULTURAL RESOURCES OVERVIEW OF THE PROPOSED BLACK CYPRESS AND MARSHALL RESERVOIRS

LEVEL II

environment consultants, inc.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. AD-A102352	2.	3. Recipient's Accession No.
4. Title and Subtitle: CULTURAL RESOURCES OVERVIEW OF THE PROPOSED BLACK CYPRESS AND MARSHALL RESERVOIRS			5. Report Date: 20 July 1981
7. Author(s): Martin J. Northern and B.D. Skiles			8. Performing Organization Rept. No.: CRR-81-11
9. Performing Organization Name and Address: Environment Consultants, Inc. 14325 Proton Road Dallas, TX 75234			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No.: (C) DACW63-80-D-0139 (G)
12. Sponsoring Organization Name and Address: U.S. Army Corps of Engineers Fort Worth District, SWFED-PR P.O. Box 17300 Fort Worth, TX 76102			13. Type of Report & Period Covered: final 14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

Brief overview of known resources to make estimates on resources that may be affected by proposed projects. It was estimated that over 900 sites may be affected if both projects are constructed. Using conventinal survey methodology, however, it was estimated that only 205 of these sites would be located. Dense ground cover is the major limiting factor. Report gives brief overview of prehistoric and historic periods, lists local informants, bibliography, and estimated requirements for next phase of work.

17. Document Analysis a. Descriptors

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: Release Unlimited	19. Security Class (This Report): Unclassified	21. No. of Pages: 70
	20. Security Class (This Page): Unclassified	22. Price

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77) (Formerly NTIS-35) Department of Commerce

41a261

DO NOT PRINT THESE INSTRUCTIONS AS A PAGE IN A REPORT

INSTRUCTIONS

Optional Form 272, Report Documentation Page is based on Guidelines for Format and Production of Scientific and Technical Reports, ANSI Z39.18–1974 available from American National Standards Institute, 1430 Broadway, New York, New York 10018. Each separately bound report—for example, each volume in a multivolume set—shall have its unique Report Documentation Page.

1. Report Number. Each individually bound report shall carry a unique alphanumeric designation assigned by the performing organization or provided by the sponsoring organization in accordance with American National Standard ANSI Z39.23–1974, Technical Report Number (STRN). For registration of report code, contact NTIS Report Number Clearinghouse, Springfield, VA 22161. Use uppercase letters, Arabic numerals, slashes, and hyphens only, as in the following examples: FASEB/NS–75/87 and FAA/RD–75/09.
2. Leave blank.
3. Recipient's Accession Number. Reserved for use by each report recipient.
4. Title and Subtitle. Title should indicate clearly and briefly the subject coverage of the report, subordinate subtitle to the main title. When a report is prepared in more than one volume, repeat the primary title, add volume number and include subtitle for the specific volume.
5. Report Date. Each report shall carry a date indicating at least month and year. Indicate the basis on which it was selected (e.g., date of issue, date of approval, date of preparation, date published).
6. Sponsoring Agency Code. Leave blank.
7. Author(s). Give name(s) in conventional order (e.g., John R. Doe, or J. Robert Doe). List author's affiliation if it differs from the performing organization.
8. Performing Organization Report Number. Insert if performing organization wishes to assign this number.
9. Performing Organization Name and Mailing Address. Give name, street, city, state, and ZIP code. List no more than two levels of an organizational hierarchy. Display the name of the organization exactly as it should appear in Government indexes such as Government Reports Announcements & Index (GRA & I).
10. Project/Task/Work Unit Number. Use the project, task and work unit numbers under which the report was prepared.
11. Contract/Grant Number. Insert contract or grant number under which report was prepared.
12. Sponsoring Agency Name and Mailing Address. Include ZIP code. Cite main sponsors.
13. Type of Report and Period Covered. State interim, final, etc., and, if applicable, inclusive dates.
14. Performing Organization Code. Leave blank.
15. Supplementary Notes. Enter information not included elsewhere but useful, such as: Prepared in cooperation with . . . Translation of . . . Presented at conference of . . . To be published in . . . When a report is revised, include a statement whether the new report supersedes or supplements the older report.
16. Abstract. Include a brief (200 words or less) factual summary of the most significant information contained in the report. If the report contains a significant bibliography or literature survey, mention it here.
17. Document Analysis. (a). Descriptors. Select from the Thesaurus of Engineering and Scientific Terms the proper authorized terms that identify the major concept of the research and are sufficiently specific and precise to be used as index entries for cataloging.

    (b). Identifiers and Open-Ended Terms. Use identifiers for project names, code names, equipment designators, etc. Use open-ended terms written in descriptor form for those subjects for which no descriptor exists.

    (c). COSATI Field/Group. Field and Group assignments are to be taken from the 1964 COSATI Subject Category List. Since the majority of documents are multidisciplinary in nature, the primary Field/Group assignment(s) will be the specific discipline, area of human endeavor, or type of physical object. The application(s) will be cross-referenced with secondary Field/Group assignments that will follow the primary posting(s).
18. Distribution Statement. Denote public releasability, for example "Release unlimited", or limitation for reasons other than security. Cite any availability to the public, with address, order number and price, if known.
19. & 20. Security Classification. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED).
21. Number of pages. Insert the total number of pages, including introductory pages, but excluding distribution list, if any.
22. Price. Enter price in paper copy (PC) and/or microfiche (MF) if known.

☆U.S. Government Printing Office: 1978—261-647/3308

CULTURAL RESOURCES OVERVIEW

OF THE

PROPOSED BLACK CYPRESS AND

MARSHALL RESERVOIRS

Martin J. Northern
and
B.D. Skiles

Prepared for:

Department of the Army
Fort Worth District, Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102

Prepared by:

Environment Consultants, Inc.
Cultural Resources Report 81-11

July 21, 1981

Environment Consultants, Inc.
14325 Proton Road
Dallas, Texas 75234

ACKNOWLEDGEMENTS

Thanks are given to the many individuals who helped in the completion of this report. These include Mrs. Paul Belding (Gregg County), Ms. Thacker Cole (Upshur County), Mr. Jessie DeWare IV (Marion County), Mr. Bennett Hill (Cass County), Mr. Max Lale (Harrison County), Ms. Harris McMinn (Camp County), and Ms. Allie Smith (Morris County), County Historical Commission Chairpersons who freely gave information concerning the historical development of each county.

A debt of thanks is due to Dr. Terry Jordan at North Texas State University who compiled the Texas Log Cabin Register. Thanks also go to Kristine Ramaekers and Rebecca Danvers of the Historical Collection at NTSU and Carolyn Spock at the Texas Archeological Research Laboratory, all of who allowed us access to their site files.

Dr. Clarence H. Webb of Shreveport was very helpful in introducing us to Mr. Forrest Murphey of Marshall who has intimate knowledge of the study area. Much thanks is due Mr. Murphey who spent almost a full day showing us around the proposed Marshall Reservoir, pointing out sites, introducing us to amateurs, collectors and other informants, and providing an assessment of the history and archaeology of the area. Many other informants gave useful information and we particularly want to thank those who made extra efforts to assist us: Mr. Ralph R. Nicholas gave information on sites in the proposed Black Cypress Reservoir; Mr. Billy Jack Anderson gave a helpful overview of types of sites and artifacts occuring in the upper Cypress drainages; Mr. Robert L. Turner and Mrs. Marie Steed gave personal assessments of archaeology in the study area and suggested the names of several informants. Mr. Billy P. Maloney allowed us to review his collections and discussed several sites which are within the proposed Marshall Reservoir.

Ms. Toni Turner-Bruseth at SMU and Mr. Jay Donnelly at the United States Geological Survey Dallas office were very helpful in tracking down and providing copies of early USGS maps.

Thanks also goes to the following staff members of Environment Consultants, Inc. for their administrative support and technical expertise: Dr. S. Alan Skinner, Director of Anthropology; Maynard Cliff, Senior Research Archaeologist; Linda A. Holder, word processing supervisor; Tamara T. Brown, Chris Corgill, and Louanne Ward, word processors; Sue Gramling, cartographer.

Table of Contents

List of Figures

List of Tables

I. INTRODUCTION

Purpose of Investigation

In February 1981, the Department of the Army, Fort Worth District, Corps of Engineers (COE) requested that Environment Consultants, Inc. (ECI) prepare a proposal to conduct an overview study of cultural resources in the Cypress Bayou Basin specifically as they relate to the proposed Black Cypress and Marshall Reservoirs (Figure 1). On February 19, 1981 a proposal was submitted. This study was completed as Work Order No. 3 for Contract No. DACW63-80-D-0139.

The contract between the U.S. Army, Corps of Engineers and ECI required that ECI (1) conduct an overview literature search of previous archaeological work in the study area; (2) identify and describe all recorded archaeological sites in the area; (3) prepare a basin site map; (4) make predictions of site density; (5) disclose project effects on known or predicted cultural resources; (6) list all collections and informants; (7) list all sources; and (8) provide recommendations. The study area was reduced in size to include the area between the two proposed reservoirs and includes specifically Lake O' the Pines. This study was done in accordance with guidelines for implementing the National Environmental Policy Act of 1969.

The Cypress Bayou Basin is located in all or part of 10 northeast Texas counties and one northwest Louisiana parish. The basin consists of the watersheds of three major streams which are called bayous in their lower sections and creeks in the upper section (Figure 1). Big Cypress Bayou runs east-west through the central portion of the basin with Little Cypress Bayou to the south and Black Cypress Bayou to the north. Little Cypress and Black Cypress Bayous enter Big Cypress Bayou near Jefferson, Texas. Towns located either partially or wholly within the Cypress Bayou Basin in Texas are listed below in order of descending population: Marshall, Mount Pleasant, Gilmer, Atlanta, Pittsburg, Winnsboro, Daingerfield, Jefferson, Linden, and Naples.

The Study Area

The study area is contained within the Cypress Bayou Basin in the northeast Texas counties of Camp, Cass, Gregg, Harrison, Marion, Morris, Titus and Upshur. The study

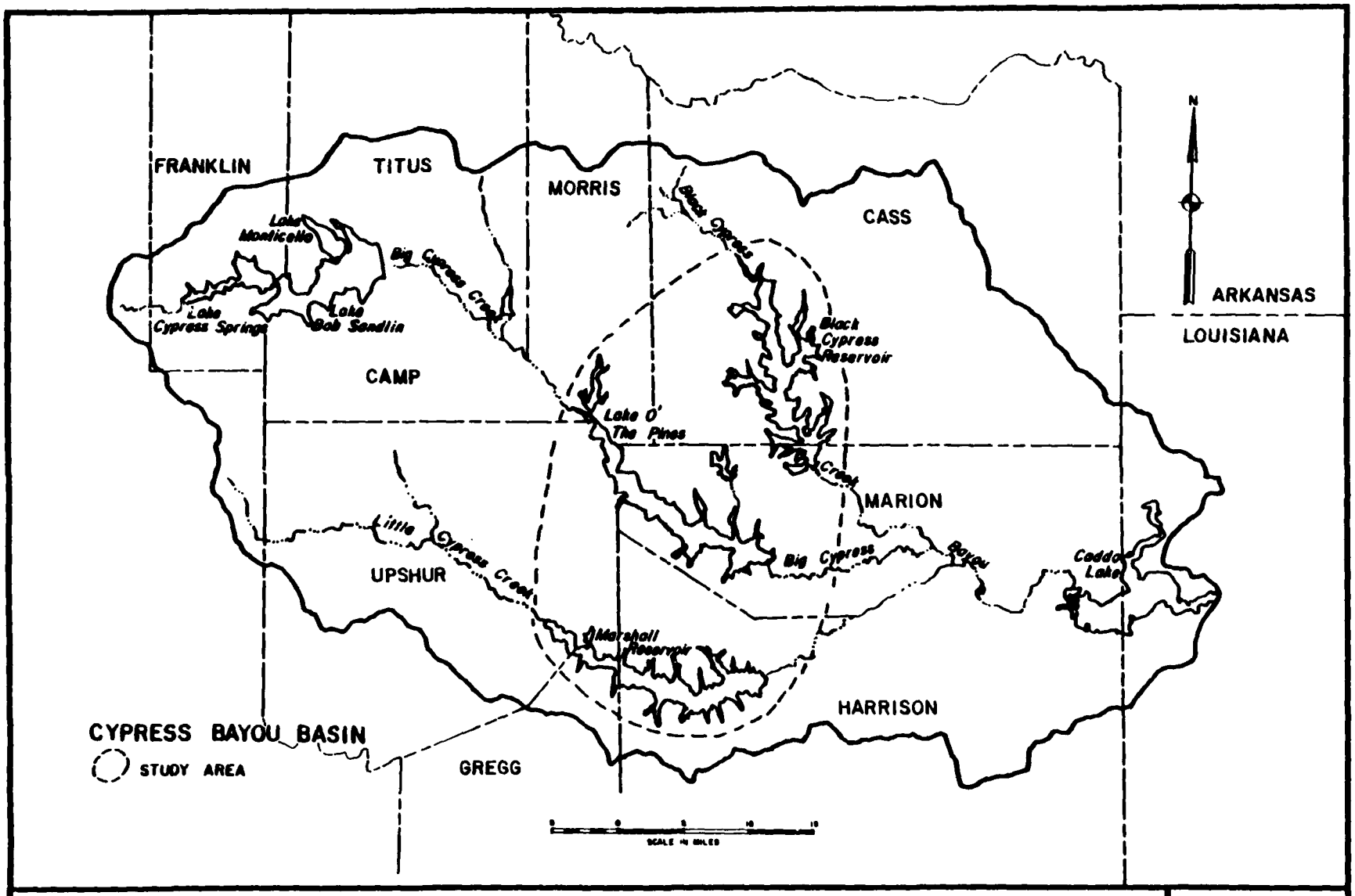


Figure 1. The proposed Black Cypress and Marshall Reservoirs in relation to the study area and other reservoirs and drainages in the Cypress Bayou Basin.

area is defined as the impoundment areas of two proposed reservoirs, Marshall and Black Cypress, and an existing reservoir, Lake O' the Pines as well as the areas between and adjacent to the reservoirs (Figure 1). Marshall and Black Cypress Reservoirs are proposed as water supply projects. In addition, recreation is another stated purpose for construction of Marshall Reservoir.

Lake O' the Pines is situated between the two proposed reservoirs. Black Cypress Reservoir would be to the north and Marshall Reservoir would be to the south. Lake O' the Pines is on Big Cypress Bayou about 12.9 km (8 miles) west of Jefferson, Texas and was completed by the Corps of Engineers in 1957. The total surface area is 15,459 ha (38,200 acres) of which 7,365.3 ha (18,200 acres) are normally inundated.

Marshall Reservoir dam would be constructed on Little Cypress Creek about 14.5 km (9 miles) northwest of the city of Marshall. The reservoir would have a surface area of 12,950 ha (32,000 acres) in parts of Gregg, Harrison and Upshur Counties. Black Cypress Reservoir dam would be constructed on Black Cypress Creek about 11.3 km (7 miles) northwest of the city of Jefferson. The reservoir would have a surface area of 14,083 ha (34,800 acres) in parts of Cass and Harrison Counties. Both proposed reservoir areas are very heavily overgrown with dense vegetation.The density of vegetation at Black Cypress is somewhat greater than at Marshall. Access to areas in the proposed Black Cypress Reservoir is restricted by the limited number of roads through the area.

Because published historical data on the specific study area are limited, it was necessary to review materials outside the defined study area to gain a more complete perspective on the history of the region. In several cases, archaeological data outside the defined study area have been considered when particularly relevent to problems within the study area. In addition, the general literature of northeast Texas has been considered in placing the study area in a proper regional context.

II. ANGLO AMERICAN HISTORY

Introduction

Anglo American settlement of the study area has been divided into six periods: (1) Plantation and Immigrant period, ca 1836 to 1861; (2) Civil War, ca 1861 to 1865; (3) Reconstruction, ca 1865 to 1870; (4) Timber Boom, ca 1870 to 1930; (5) Oil Boom, ca 1930 to 1941; and (6) the Recent period, ca 1941 to present.

Plantation and Immigrant Period 1836-1861

Although some Anglo settlement occurred in the region of the study area prior to 1836, thousands of immigrants were attracted by free land offered after Texas independence. It is widely believed that the Caddo Indians had abandoned this area in prehistoric times (Swanton 1942:5), but some Caddo groups are known to have been in the area of Jefferson and Caddo Lake shortly before the main thrust of Anglo settlement began (Austin 1837; undated map in Indian Room of the Jefferson Historical Museum; Jesse DeWare personal communication).

Although the Caddo population in the region immediately prior to Anglo settlement is not known, it is clear that the Indians were no significant barrier to the influx of Anglo immigrants. The final removal of all Indians from northeast Texas after the Cherokee War in 1839 offered Anglo settlers, coming mainly from the United States, unrestricted access to free or cheap land and by the late 1840s, no land in Marion County was unclaimed (White 1964:42). In 1832 Smithland was founded south of Jefferson on the banks of Cypress Bayou (Webb and Carroll 1952:628). The settlement contained only six houses and was abandoned in 1841 (Gregg 1952).

This period in northeast Texas was characterized by farms, both large and small, which mainly produced cotton (Allie Smith personal communication). Although most of the new settlers were small farmers, large tracts of cheap fertile land were available and many large plantations were etablished by slaveowners relocating from southern states to east Texas where slavery was not yet a heated issue. The plantation system was widespread in the populous eastern counties during this period and social and economic conditions were comparable to those in the older slave states (Ramsdell 1970:11-12).

Harrison was the most populous county in the state in 1850 (U.S. Census) and a relatively large percentage of the population was slaves (Max Lale, personal communication).

Although cotton was generally grown in rich alluvial valleys, or flood plains, uplands were preferred by most farmers because of the risks of periodic inundations. John Barrow, an English civil engineer who toured the area prior to 1849, observed that

> the (cotton) plantations are generally fixed on river banks (i.e., flood plains) subject to overflow, and a periodic inundation (as was the case this season on a great many of them) would destroy the whole of the young plants, leaving the ground desolate. The upper-land farmer is not subject to these visitations, and therefore, in some degree, is enabled to make a more equable return (Barrow 1849:51).

Although cultivation of flood plains was often attempted, and many times very successfully, areas subject to inundation were not preferred and were not chosen as sites for building residences. Upland areas were chosen, almost exclusively, for siting residences and communities (Ralph Nichols personal communication). Only a few exceptions are noted to this pattern in the study area. The Valley Plains Cemetery and an unnamed cemetery nearby are situated in the Black Cypress Bayou flood plain just southeast of the proposed Black Cypress Reservoir dam site and at least eight houses were located in the northern portion of the proposed reservoir in 1912 (see Chapter IV).

This predilection for upland areas was observed by Barrow (1849:62) who noted that "(s)cattered over this portion of the State (were) seen primitive chapels, built of logs, generally placed in a secluded locality on the margin of the forest, or on an eminence, if in the woodland district; their humble character in severe contrast with the surrounding scene." These early chapels were often centrally located in relation to the surrounding rural farmsteads and often formed the nexus of later communities.

The selection of upland areas also was conditioned by factors other than the obvious ones. Churches were placed next to roads and the first roads were often circuitously routed along the divides between watersheds. This was necessary to avoid the almost impassable flood plains. Attempting to cross the flood plains of northeast Texas with a

wagon or buggy, other than in late summer, was considered foolhardy. Barrow observed that it was

> only at these river bottoms that any serious objection exist(ed) to traversing the country, either with wagons and oxen, or the light buggy drawn by a pair of mules, which most of the farmers use. In one place we saw the remains of a waggon, and on another occasion passed by two steers which were dying from excessive fatigue. It is therefore an important consideration with the inhabitants, whether these almost insurmountable objections to the transportation of produce ought not to be at once removed. They are disadvantageous features in the country; and until something is done to enable the farmer to cross these bottoms with facility and safety, so long will a drawback exist to the development of the inexhaustible soil. It is often the case that a team occupies a whole day in getting through one of these swamps, the waggon being buried up to the axle in mud, and the poor beasts groaning under the weight behind them. This space of low flat land is a peculiarity of most of the Texas rivers...(Barrow 1849:23).

Until 1850, the economy of the study area was dominated, almost exclusively, by small farms and large plantations. The dichotomy in sizes of farms also was reflected in the architecture of the period.

The rural structures of small farmers were constructed of plain and adzed pine logs (White 1964:43). Two types of rural habitations were common on small farms: (1) a single room log house about 5.5 m (18 ft) square with a rough wooden floor (White 1964:42) and (2) a two room log house constructed of adzed logs, each room from 4.9 to 5.5 m (16 to 18 ft) square and separated by a covered hallway ("dog-trot") about 1.8 to 2.4 m (6 to 8 ft) wide (White 1964:43). Barrow (1849:48) described the rural homesteads of northeast Texas as primitive and said that the "better sort have two rooms under one roof of shingling, with an open space between in which the occupants take their meals, and indulge in rest during the heat of the day. They are built of logs a little squared by the adze, and are elevated about two feet above the ground."

In contrast, the plantation homes and many of those in towns were more elaborate and styled after those in older parts of the South. Barrow commented that

> (f)or 12 mi (west of and) before reaching Marshall, the cultivation of the land (was) of a greater extent than any (he) had yet seen, and evidences of wealth became gradually visible. The homesteads (were) of a more substantial character, especially in the suburbs of the town, some of which (were) built of brick, and (had) verandahs extending the whole length of the building, giving to their appearance a look of elegance and comfort. The columns supporting the portico (were) mostly fluted, and (were) ornamented with capitals of various styles; and the numerous kinds of fruit trees and plants of beautiful colors (that were) growing before them, and which were then in full bloom, gave a pleasing animation to the exterior of (those) dwellings (Barrow 1849:41).

Outbuildings were associated with small farm habitations and usually consisted of a smoke house for curing and storing meats and vegetables, a square granary for storing corn (Barrow 1849:54), and a stable for the livestock (with the exception of pigs, which ran free in the woods) (White 1964:43).

Marshall was the first city in northeast Texas to develop along what was a major route for immigrants moving overland from Louisiana to Texas and points west (Jesse DeWare personal communication). In 1849, Marshall was the largest town in northeast Texas, with a population of 1,500 to 2,000 (Barrow 1849:34) and was the seat of the most populous county in Texas (U.S. Census 1850).

After the establishment of steamboat navigation on Big Cypress Bayou in 1844, Jefferson, at the head of navigation, grew rapidly and was soon the main inland port of Texas. In 1832 the town site was known as Urquhart's Ferry, since Mr. Allen Urquhart owned and operated a ferry at that location (Daily Jimplecute April 11, 1937). In 1844, Mr. Amos Ury, a merchant, established the first store at the site (Daily Jimplecute September 1, 1876). Jefferson became the westernmost and northernmost port which was easily accessible from the Red River (White 1964:54). The growth of Jefferson as a port was a direct result of the "Great Raft" on the Red River. The raft was a fantastic jam of trees and detritus which in the early 1800s dammed the main channel of the Red River from Natchitoches upstream for about 161 km (100 miles). No one has satisfactorily analyzed the dynamics of the origin and effects of the "Great Raft" but it is widely believed that the jam was caused by large scale undercutting of densely forested banks of the Red River by the meandering stream at

some undetermined date. It is also widely believed that the raft was responsible for formation of several natural lakes in the region, including Caddo Lake.

In 1828, because of complaints from settlers on the upper Red River frontier, and the expense of supplying Fort Towson overland, the United States Corps of Engineers began removal of the raft. The project was abandoned in 1829, but was renewed in 1833 with complete removal of the raft in March, 1838 (O'Pry 1928:13). But the raft began forming again almost immediately and only four months later almost 1 km (one-half mile) of the raft had re-formed. By the early 1840s the raft had impacted along several kilometers of the river. For a short time the majority of the river's water was diverted through bayous along the left bank, but subsequent growth of the raft shifted the main course to the right bank through a system of bayous and lakes (Caddo and Soda, or Sodo, Lakes). The raised water level, backed up into Big Cypress Bayou, allowed the first steamboat to reach Jefferson in 1844 (Daily Jimplecute September 14, 1876). Shreveport had been the major port and trade entrepot along the upper Red River, but during the early 1850s growth of the raft jammed port facilities at Shreveport and gave added impetus to Jefferson's growth (Jesse DeWare personal communication).

It was only after the regrowth of the raft that Caddo Lake and Big Cypress Bayou became parts of the Red River transportation route (White 1964:51 from House Executive Document Number 182, 2nd Session, 53rd Congress, 1893-1894:119). The importance of Jefferson as a trade center and port is manifested by a major reorganization of the landscape in northeast Texas during Jefferson's heyday (Northern Standard 1854; Eastern Gazette, March 14, 1857). Jefferson was the major trade center for points as far away as Denton. It is likely that architectural styles in Denton were influenced by those in vogue at Jefferson (Munroe, 1975; Le Anne Baird personal communication). The importance of Jefferson as a port perhaps can be illustrated best by the fact that the Republic of Texas felt compelled to establish a customs house at Port Caddo (on Caddo Lake) in 1845 to collect taxes on goods. In a six month period, 10,000 bales of cotton, 18,144 kilograms (40,000 pounds) of hides, and 45,359 kilograms (100,000 pounds) of beef were exported through this customs house and imports valued at $200,000 were recorded (White 1964:53; Northern Standard October 23, 1844).

Civil War 1861-1865

During the Civil War, northeast Texas, like the rest of Texas, was prosperous relative to the other Confederate States. Large harvests of cotton continued to be produced from plantations even though most able-bodied men were away in the army. This was due largely to the increase in numbers of slaves available for work because slave owners in the more troubled southern states moved their slaves to Texas for safekeeping. In addition, production on Texas plantations was not disrupted by military action. Large quantities of Texas cotton still reached European markets and provided a steady flow of hard money into the Texas economy. As a result, the Texas economy was not as depressed by the war as those of other Confederate States and recovery was more rapid.

Texas was a major supplier of Confederate foodstuffs and livestock and a significant portion of the manufactured European goods entering the South came through Texas ports and from Mexico through Texas. Of particular importance to the Confederacy were locally produced cotton, maize, leather products, lumber, hides, beef and tallow. During the Civil War, the Confederacy operated a meat packing house and the State operated a shoe and leather goods manufactory at Jefferson (White 1964:75). A Confederate powder mill was established at Marshall and iron foundrys in Marion County are believed to have been converted in part to production of war ordnance and munitions (Jesse DeWare personal communication). Many local industries, such as tanyards, sprang up to supply needs of the Confederate Army.

Jefferson became even more important as a port during the early part of the Civil War because of the partial blockade of Gulf ports (*Confederate News* 1862). But the appearance of the Federal navy on the Red River in 1864 halted most commercial traffic (White 1964:76).

Marshall became an important Confederate center during the Civil War with ordnance and supplies concentrated, manufactured and stored there. The Confederate post office and the Trans-Mississippi Department treasury and headquarters were at Marshall. The exiled state government of Missouri also relocated in Marshall when their state fell to the Union Army (White 1940:991).

Reconstruction 1865-1870

During the latter part of the Civil War and throughout the Reconstruction period, most of the large plantations in Texas were split into smaller farms. The hardships and heavy tax burden of the last years of the Civil War forced many plantation owners to sell off portions of their estates a piece at a time. The hardest blow dealt the plantation system in Texas was the final emancipation of the slaves and the concomitant rise in costs and shortages of field labor. Labor shortages were aggravated by an exodus of many blacks from the area back to their home states (from which they had been sent for safekeeping during the war) and their frequent refusal to return to work on plantations, even for wages (Ramsdell 1970:70-75). The labor shortages were particularly acute in Harrison County (and Marshall) where more than half the population were slaves (White 1940:991; Max Lale personal communication).

Timber Boom 1870-1930

In the early nineteenth century, most of east Texas was covered by a dense forest consisting largely of evergreen conifers (predominantly pines) liberally interspersed with hardwoods (predominantly oak) (Smith 1849:12; White 1964:24). The arrival of the railroads during the 1870s stimulated large scale exploitation of the east Texas forests.

The railroads not only provided easy transportation for the timber, but were a major market for it as well. Millions of east Texas trees were cut into crossties and bridge timbers for extension of the railroads into the treeless west. Before the advent of railroads, timber in most of east Texas was cut mainly for local building, and small saw mills were scattered throughout the region (Skinner 1979). By 1860, commercial lumbering and production of dimension lumber represented about 35 percent of the value of goods manufactured in Marion county (White 1964:67). However, intensive exploitation of the east Texas forests did not begin until there was economic recovery after the Civil War and a stimulus was provided by the railroads.

The timbering industry grew 2,000 percent from 1870 to 1907, and Texas ranked third in the nation in timber production (Bruseth et al. 1977:48). Many logging camps, communities and tramways were built in the region of the study area during this period. Some time between 1906 and 1912 a 6.4 km (4 mi) section of logging tramroad was extended into the Flat Creek community (adjacent to the proposed Black Cypress

Reservoir) from a point to the southeast (USGS 1910 Linden Quadrangle and 1914 Daingerfield Quadrangle). Skinner (1979) has studied the archaeology of east Texas tramways and has demonstrated a method of dating these and other lumbering related sites by coring trees which were planted or have grown on the sites and determining their age by counting tree rings.

Over-timbering in east Texas caused a depletion of virgin timber, forcing many large lumber mills to cease operations in the 1920s. The virgin timber stands of east Texas were once so extensive that they were believed to be inexhaustible. Today it is doubtful if any stands of virgin timber still exist in northeast Texas. Cutting of timber is now regulated and managed with a goal of perpetual production (Bud Felker personal communication).

Oil Boom 1930-1941

Large oil discoveries were made in northeast Texas from the early 1930s throughout the 1940s. Although increases in population densities attributable to the oil boom are apparent in several of the counties contained in the Cypress Bayou Basin, the dramatic increases normally characteristic of the oil boom period in other east Texas counties were not generally observed except in Gregg County which contained a large part of the huge East Texas oilfield (Mrs. Paul Belding personal communication), the largest oilfield in the world at that time. The population of Gregg County more than tripled in the period 1930-1940 (U.S. Census). The oil industry has had a tremendous impact on the economy of northeast Texas and the area is still a major producer of crude (Bruseth et al. 1977:48). The oil boom era was characterized by the establishment of numerous shortlived oilfield communities and "roustabout" camps located within and adjacent to major oil fields.

Recent Period 1941-Present

Texas was a major military center in World War II. The U.S. Army maintained 15 posts and camps and 32 prisoner-of-war centers in Texas (Texas Almanac 1974-1975:538). The nearest camp to the study area was Camp Fannin located 16 km (10 mi) northeast of Tyler, Smith County, and covering more than 5,665.6 ha (14,000 acres). The camp was for infantry replacement training and prisoners-of-war (Webb 1952:281). The years since World War II have been dominated by urbanization and a general prosperity. A

period of drought from 1950-1956 caused a general population decline in the rural study area, but recently, population density is increasing due to "urban flight" and redevelopment of rural areas.

Within the study area, the main industries are ranching and timbering. Farming is apparently practiced now only on a very minor scale. Recreation industries are economically significant in the Lake O' the Pines area and historic appreciation related tourism contributes significantly to the economy of Jefferson.

A model for historic settlement within the study area has been developed and presented in Chapter V. A list of local newspapers in operation around the turn of the century is presented in Appendix A.

III. NATIVE AMERICAN OCCUPATION

Previous Studies

The Cypress Bayou Basin in northeastern Texas has not been overwhelmed by archaeological field work. However, sufficient field work has been carried out by reservoir salvage projects and by numerous individuals to produce a general overview of the aboriginal settlement of the area. Unfortunately, until recent times the majority of the archaeological projects completed within the basin area (as well as the northeast Texas region as a whole) dealt only with prehistoric cultures. This has created a paucity of historic archaeological information from this area.

The earliest published works concerning the prehistory of the basin area are by J.E. Pearce, who was affiliated with The University of Texas. In 1920 he noted the presence of mounds in the Caddo Lake area. In the 1930s, major field expeditions into the region began under the auspices of the W.P.A. and Pearce. A.T. Jackson and W.R. Goldschmidt were chosen to carry on the field work that Pearce could no longer do because of his advanced age. During this time A.T. Jackson located and tested numerous sites in the Cypress basin. In May of 1931 he reported on the Bruce J. Connally site 2.5 km (4 mi) north of Winnsboro (Jackson 1931). The site contained one burial and midden deposits. In 1934 he located and tested the Mattie Gandy site in Franklin County 4.3 km (7 mi) north of Winnsboro (Jackson 1934). Testing revealed 11 graves containing 90 vessels in association with large midden mounds. On July 22, of the same year he completed testing on the S.P. Brown Farm 1.2 km (2 mi) north of Winnsboro where he secured numerous ceramic vessels. He also tested sites on the W.A. Birdson Farm, Ollie Chitsey Farm and the Minnow Sparks Place (Jackson 1934). Two of the more well known sites reported on by Jackson are the R.L. Jaggers site in Franklin County which contained four burials and numerous artifacts which he felt belonged to the Caddo period, and the L.A. Hale Farm in Franklin County which contained two major mounds with an extensive village deposit (Jackson 1934). In 1935 Goldschmidt returned to the Jaggers site for more extensive testing (Goldschmidt 1935).

With the start of World War II, archaeological field work in the area was halted and remained somewhat stagnant until 1951. In June 1951, a survey report was prepared by the River Basin Surveys, Smithsonian Institution, on the Ferrell's Bridge Reservoir (now Lake O' the Pines) in Harrison, Marion, Upshur, Cass, Morris, Titus and Camp Counties (Miller et al. 1951). The survey, which recorded 34 sites of various time periods, was directed by Robert L. Stephenson and Edward B. Jelks. Subsequently E. Mott Davis tested and reported on the Whelan site, a Caddo III period site which contained mounds and house sites, but no burials (Davis 1958). The following year Jelks and Curtis Tunnell excavated the Harroun site, a Whelan complex site in Upshur County which consisted of four small mounds (Jelks and Tunnell 1959:61). This site was very similiar to the Whelan site . Near the Red River in Twelve Mile Bayou Basin, which is somewhat of a marginal zone to the study area, Clarence Webb excavated the Belcher Mound site belonging to the Belcher focus, Caddo IV period (Webb 1959). Twenty-six burial pits revealed 48 skeletons at the site.

In the 1960s, at Lake O' the Pines, a number of archaeological salvage projects were carried out by Davis and others. Davis and Bernard Golden investigated the Ben McKinney site, a Titus focus site, which contained burials (Davis and Golden 1960). More recently, Turpin, Rabinowitz, Henderson, and Patterson completed and reported on a study which attempted a statistical examination of Caddo vessel design and shape using a sample of material that was recovered at the Ben McKinney site, Late O' the Pines (Turpin et al. 1976). Davis and Gipson excavated the Dalton site, a Whelan complex mound (Davis and Gipson 1960), while E.M. Davis and William Davis excavated the Jake Martin site, an Archaic site of the La Harpe aspect (Davis and Davis 1960). In 1967 excavations were conducted at the Tuck Carpenter site, a Titus focus site in Camp County and have recently been reported by Turner (1978). This cemetery site included 44 graves with a wealth of grave goods. During the summer of 1968, J. Gibson conducted an archaeological survey at Caddo Lake (Gibson 1969). He reported sites which contained Archaic, Alto, Bossier and Late Fulton components. During the same year, Hsu completed an appraisal of the archaeological resources in Titus, Camp and Franklin Counties for the Titus County Reservoir (Hsu 1969) and an evaluation of the Big Cypress Lake (Hsu et al. 1969). In 1970 a manuscript on the R. A. Watts site, which contained Archaic and Caddoan components, was written by Stearns (1970).

During the 1970s a number of salvage projects were undertaken in the basin area. The first of these was the interim survey report concerning Lake Monticello (McCormick

and Scott 1971). A total of 56 sites were encountered containing Archaic and Neo-American components. Also in the same year a 4.6 m (15 ft) high mound at the Keith site was tested by Brown (1971). He also examined the Hale site which contained two large mounds and is adjacent to Lake Monticello (Brown 1971). At Lake Monticello, McCormick recorded 68 prehistoric sites which indicated Archaic to Proto-Historic occupation (McCormick 1973a). He reported that the majority of prehistoric sites were located in upland type settings, few were located on the flood plain proper and none in drainages or bogs. McCormick also carried out archaeological excavations at six sites in Lake Monticello (1973a). Sites were typed into three major catagories: (1) villages, (2) seasonal camps, and (3) activity specific sites which were further subdivided into: (a) hunting stations, (b) fishing stations, (c) quarry/workshops, and (d) ceremonial sites. In 1973 an archaeological reconnaissance was completed of the Lake Swanano region near Lake Monticello (McCormick 1973b). In all 35 sites were recorded, of which five were historic European, one was historic aboriginal and 29 were prehistoric aboriginal. During the spring of 1974, Cliff, Carter, and Verrett did an intensive survey at Lake Swanano. At that time a total of 71 sites were reported (Cliff et al 1974).

In 1975 investigations were also carried out at Lake Bob Sandlin (Sullivan 1977). During the survey 106 sites were located of which seven were tested (one was the R. A. Watts site). At Lake Bob Sandlin, Sullivan reported that specialized camps were generally located on the uplands, slopes, and terraces with little utilization of flood plain rises (Sullivan 1977). However, seasonal camps were occasionally situated on these rises. Five distinct site types were identified by Sullivan: (1) seasonal camps, usually .5 to 1 ha (1 to 2 acres) in size, which represent a short-term seasonal occupation; (2) specific activity sites, less than .25 ha (one half acre) in size, representing limited functions wnich generally did not contain ceramics; (3) quarry stations, areas containing outcrops of raw materials which were utilized for tool manufacturing and usually containing primary flakes; (4) fishing stations near streams and swamps containing fish bone and shell midden deposits in association with bifaces and scrapers; and (5) hunting stations consisting of projectile points and scrapers with limited lithic debris (Sullivan 1977).

More recently, during a pipeline reconnaissance study, Bruseth recorded 32 sites in Franklin, Hopkins, Van Zandt and Wood Counties (Bruseth 1976). In 1976 and 1977 Haden Whidsitt conducted archaeological research in conjunction with a waste water pipeline near Hallsville (Whidsitt 1977; personal communication, 1981). Eight Caddo sites were recorded along Clarks and Ward Creeks. In 1978 Espey Huston and

Associates completed a survey of approximately 2,832.8 ha (7,000 acres) near Hallsville in conjunction with mine studies. Pete Nichols reports finding 150 sites (89 of which were prehistoric) (personal communication, 1981). The report is in review at present and was unavailable for public inspection.

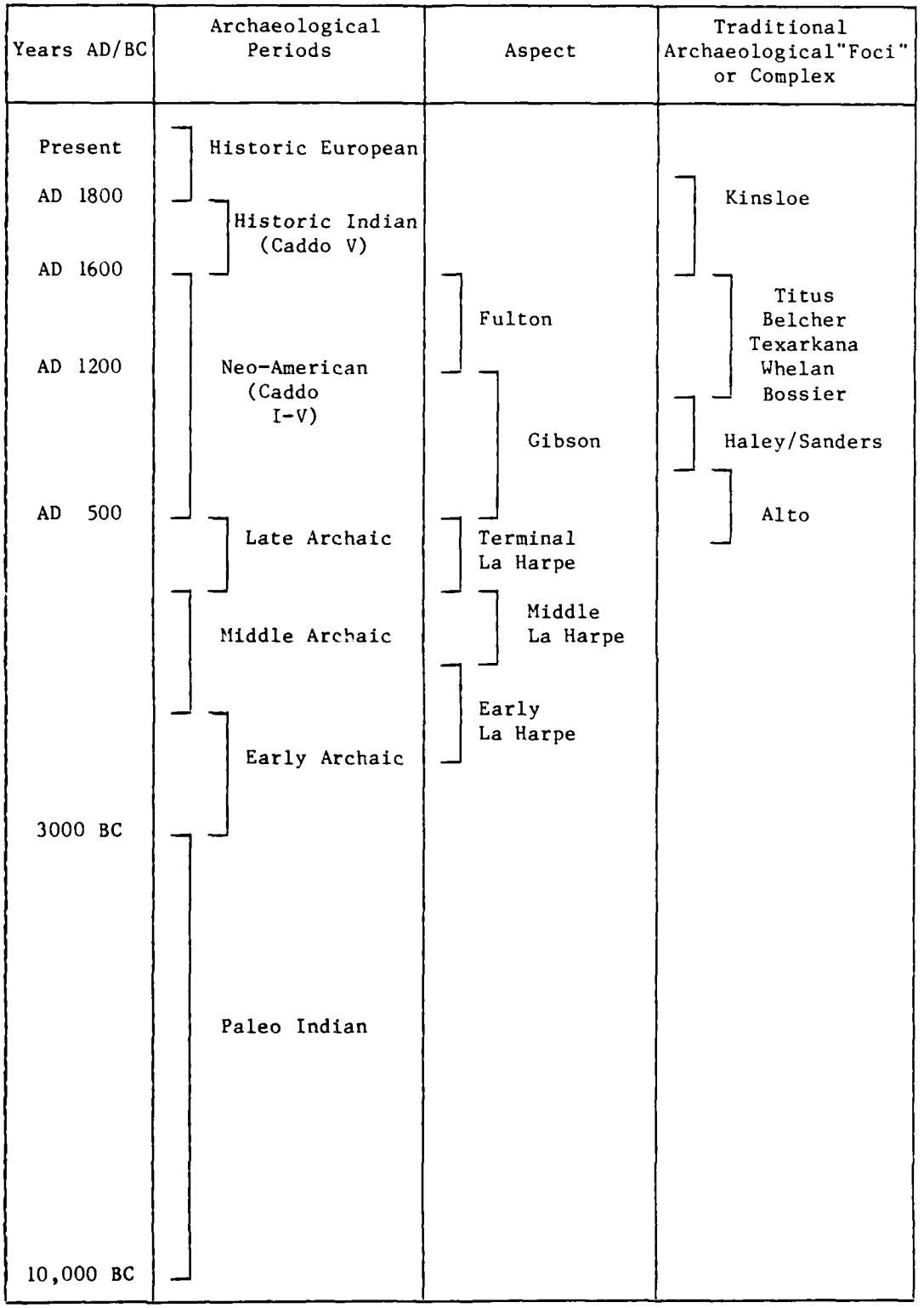
Culture History

As noted above, a moderate amount of archaeological and historical research has been conducted in northeast Texas. This work has been carried out by both professional and amateur archaeologists over the past 60 years (for general summaries of the archaeology of northeast Texas see Krieger 1946; Suhm et al. 1954; Webb 1960; and Davis 1970). This research has provided a basic five-stage chronological sequence for the study area (after Suhm et al. 1954:144-227; Davis 1970:46-55) as listed below and and illustrated in Figure 2.

Time Period	Inclusive Dates
Paleo Indian Period	10,000-3,000 B.C.
Archaic Period	3,000 B.C.-A.D. 500
Neo-American (Caddo) Period	A.D. 500-1600
Historic Indian Period	A.D. 1600-1800
Historic European Period	A.D. 1800-1980

Previous studies in the around the project area suggest that the major occupation was by Archaic (LaHarpe), Sanders, early Titus (Whelan complex), Titus, and Kinsloe focus peoples. However, sites representing the Alto focus have been found upstream and Belcher, Bossier, and Texarkana focus sites occur in peripheral regions of the study area. Artifacts typical of these foci have been reported in the study area but are not thought to represent occupations.

Figure 2.
Cultural complexes represented in or around the study area.



Paleo Indian Period 10,000-3,000 B.C.

This period remains largely unidentified in east Texas. In Van Zandt County the Yarbrough site yielded two Clovis point bases found in situ (Suhm et al. 1954:147). The majority of the information concerning this period is limited to private collections and the occasional isolated find of Scottsbluff, Plainview, Meserve, and Angostura points. Fluted points such as Clovis and Folsom are less common than the more recent types but are found widely scattered throughout east Texas. Numerous Paleo Indian period projectile points have been observed in collections reportedly from the study area.

San Patrice points are the only Paleo Indian projectile points that have confidently been recovered from a reliable archaeological context in this region. This point style is found on sites in northeast Texas and a specimen from northern Rusk County is made of Manning Fused Glass (Brown 1976:196). At the John Pearce site near Shreveport, Webb, Shiner, and Roberts have described a San Patrice site (Webb et al. 1971). The presence of this site and the numerous surface finds suggest that it is merely a matter of time before more Paleo Indian sites are found in east Texas.

Archaic Period 3000 B.C. - A.D. 500

The term "Archaic" has been used in the past to refer to an evolutionary stage, a temporal period, and a cultural tradition (see Shafer 1976). Today, it is most often used to refer to "a foraging or hunting and gathering adaptation" (Shafer 1976:5), but it also is used in a practical sense to refer to a block of time during which this "Archaic" type of adaptation (or tradition) was practiced. Thus, reference to the Archaic period has a number of important connotations with regard to subsistence patterns, seasonal activities, group structure, population, and technology.

It is suggested that the regional and local patterns of the Early Archaic overlap with the preceding Paleo Indian period. These early groups were engaged in a seasonal round of subsistence activities and left no large base camps. Instead, the settlement system consisted of a series of seasonal campsites associated with special-function sites.

During the latter stages of the Early Archaic and early phases of the Middle Archaic period, the La Harpe aspect emerged (Johnson 1962:268-280). The early stages of this aspect contained a distinctive tool assemblage consisting of expanding stem dart points

such as Ellis and Yarbrough. Characteristically, this aspect contains flexed burials without grave goods. Also present in various styles are spear points, "T" shaped drills, fist axes, small snub-nosed scrapers, milling slabs, manos, tubular beads, boat stones, and occasional Alba arrow points (Suhm et al. 1954:148; Johnson 1962:268-280; Bruseth et al. 1977:29-30). At present no information is available concerning house size, house type, or village size.

The Resch site in Harrison County, Texas which contains Archaic components yielded radiocarbon dates spanning the period 400 B.C. to A.D. 100 (Webb et al. 1969:95-103). Other sites reported containing Archaic materials in east Texas are the Pipeline, Grey, Hickey, Rudd (Hayner 1957:169-180), Yarbrough, and Miller sites (Johnson 1962:141-284), to mention a few which have received attention.

During the latter half of the Middle Archaic period, the Middle La Harpe aspect developed. All cultural components remained the same as the Early La Harpe with the exception that expanding stem dart points were gradually replaced by contracting stem points (Johnson 1962). The Late Archaic or Terminal La Harpe period is marked by the appearance of a thick, crude, sandy paste pottery and a similar grog tempered pottery known as Williams Plain. This period is representative of the transition from Archaic to Neo-American (Gibson aspect). It was basically a shift from an economy based primarily on a mobile hunting and gathering to one consisting of a more sedentary village-dwelling society.

Trade in exotic materials is not important in east Texas during the Archaic except during what Shafer (1975:253) has referred to as the Woodland or Hopewell expansion into the area, and this pre-Caddoan presence is generally further to the south. Cherts primarily from central Texas are the main exotic resource that investigators record in Archaic sites throughout east Texas. Grady (1978) has developed a model to explain these patterns for the Middle Trinity River Basin, but closer to the project area Anderson (1972:175) has discussed the use of central Texas cherts. On the other hand, Brown (1976:205) finds no evidence of Archaic tools made of Manning Fused Glass. Suffice it to say that there is evidence of non-local cherts being used to manufacture projectiles during the Archaic in east Texas.

It is hypothesized that life continued to become more sedentary with a general rise in social organization toward a more elaborate system. Hunting was still a major part of the subsistence, but farming activities were becoming increasingly more important.

Neo-American (Caddo) Period A.D. 500-1600

The origin of the Caddoan culture is not completely understood. Several general theories have been put forth concerning its origin. One is that the Caddo people emerged around A.D. 500 in Texas and Louisiana as a fully developed complex. "Within this interpertive viewpoint, the early phases of the Caddoan tradition would serve as the origin and impetus for many of the uniformities attributed to the subsequent intensive farming, mound-building cultural expression (the Mississippian pattern) found in the Mississippi Basin" (Wyckoff 1971:31).

Another theory is that Caddoan people were late arrivals to the area (post A.D. 700) as a result of diffusion from the lower Mississippi valley (Ford 1951:125-129; Griffin 1961).

The Neo-American Period is usually defined by the widespread appearance of pottery along with the occasional presence of temple mounds (Webb 1960:48-49) about A.D. 500. This period is divided into two aspects, the Gibson and the Fulton, then subdivided into separate foci, Alto (Gibson), Haley (Gibson), Sanders (Gibson), Bossier (Fulton), early Titus (Whelan complex:Fulton), Texarkana (Fulton), Titus (Fulton), Allen (Historic) and Kinsloe (Historic).

Alto Focus (Gibson Aspect) Caddo I

This focus as well as the Gibson aspect were defined by excavations at the George C. Davis site in Cherokee County (Newell and Krieger 1949; Story and Valastro 1977). Other evidence of this focus was found at Lake Palestine (Anderson et al. 1974), the Keith and Hale mound sites, and at Caddo Lake (Webb 1960).

Characteristically the Alto focus consists of large village sites with accompanying mounds. Houses appear in a variety of shapes and sizes with round and square floor plans ranging in diameter from 6.4 to 15.2 m (21 to 50 ft). Grit, bone, and sand tempered pottery emerges in a number of styles as do long stemmed pipes and clay figurines. The tool assemblage contains Alba arrow points, Gary and Ellis dart points, ground and polished stone tools, as well as "cold hammer copper bits" (Suhm et al. 1954; Davis 1970). Alto focus burials frequently have an abundance of exotic trade goods in the form of minerals, tools, shell, and other non-utility items. Trade for cherts is less common than before and, except for Manning Fused Glass, local cherts and

quartzites are the normal resource for chipped stone tools. Alto focus sites tend to be large in area, as at the Davis site. Furthermore, there is little evidence of support hamlets or even contemporary task-specific sites in the area around Davis (George Kegley, personal communication). At Lake Palestine there are few Alto focus sites present compared to the more recent prehistoric occupation. A multiple burial with Alto pottery was located and excavated at Lake Palestine (Anderson 1972). The Lake Palestine area appears to represent the upstream extension of the Alto focus, but there is little evidence for major satellite communities along minor drainages which lent support of any kind to the large mound centers such as the George C. Davis site.

Sanders Focus (Gibson Aspect)

The Sanders focus is best known from the T.N. Sanders site in Lamar County, but as described by Krieger (1946) this is a widespread phenomenon which occurs along the western edge of the Caddoan area. Sanders focus sites occur at Cooper Lake (Doehner et al. 1978), Lake Fork Reservoir (Skiles et al. 1980), and in the upper Neches and Sabine River valleys (Skiles et al. 1980; Anderson 1972) and the Troup Mine (Skinner et al. 1981). Sites tend to be villages that are located in marginal areas away from major river drainages except at the upstream end of drainage systems. Little is known about Sanders focus sites outside of their major area of description, and this is related primarily to lack of study, not lack of available data.

Haley Focus (Fulton Aspect) Caddo II

The appearance of the Haley focus is marked by the emergence of major burial and mound sites such as Belcher Mound, Caddo Parish, Louisiana (Webb 1959) and Hatchel Mound, Bowie County, Texas (Newell and Krieger 1949:214). The graves (which contain from one to four individuals) are very similiar in associations to Alto focus burials (Davis 1970:44). Characteristic ceramic types represented in both foci are Hickory Fine Engraved, and Dunkin and Crockett Incised. Corner-notched arrow points of the Hayes, Alba and Scallorn variety are also present. House floors are found in both circular and rectangular shapes with interior fire pits.

Around A.D. 1200 there was a major cultural change. This involved a general shift in ceramic artistry to a wider variety of styles. By Fulton times, it is hypothesized that there was a breakdown in the social organization which resulted in the abandonment of

the temple mound-large village complex everywhere except the Red River (Skinner 1977, 1981) and a shift to smaller villages or hamlets.

Instead of a population decrease, it is hypothesized that the population dispersed and may even have grown slightly. Dillehay (1974:184-185) suggests that environmental changes forced Oklahoma and east Texas agriculturalists to reorient their subsistence patterns toward seasonal bison hunting and habitation along the Red River and head waters of tributaries that feed the Sulphur, Sabine, and Neches Rivers. These tributaries along with the Red River would provide a permanent water source which would support agricultural operations without being depleted during long dry periods. While there is no substantial evidence for such an environmental change in Texas, it should be noted that there are few reliable paleoenvironmental data for the last 2,000 years in general. This shift to smaller groups along the tributaries because of climatic factors would explain the general degradation of the life styles by the emergence of the Fulton aspect. However, the validity of this model is somewhat questionable when applied to the northeast Texas area (Lynott 1979).

An alternative explanation of the change has been developed by Skinner and Bruseth (nd.). They postulate that the environmental change was primarily due to a drought which resulted in decreased localized rainfall in east Texas. This decrease was not felt as strongly at the upper ends of tributary watersheds but was of sufficient deviation to dry up the major rivers and streams. This forced the dispersal of the aboriginal occupants and stimulated reliance upon agriculture as a reliable food source. Many major river valley sites such as Davis as well as many areas including the upper Sulphur River and Big Pine Creek (Hyatt and Mosca 1972; Mallouf 1976) were abandoned because of an inadequate watershed to support a permanent population. This dispersed pattern is reflected in the widespread appearance of the Frankston and Titus foci (Turner 1978).

Bossier Focus (Fulton Aspect)

Only one site representing this focus has been found in Texas, the Harrison Bayou site at Caddo Lake in Harrison County (Webb 1948:101). Sites of this focus are characteristically cemetery and non-mound small village sites. Ceramics are generally clay-grit tempered of the Pease Brushed-Incised and Belcher Ridged varieties (Davis

1970:46). House floors are oval with long entranceways. Davis (1970:47) suggested that the Bossier focus may be directly ancestral to the Texarkana focus.

Whelan Complex (Fulton Aspect)

Only four sites have been reported which are represenative of this complex: Harroun, Dalton, Whelan, and Sam Roberts. All were found along Cypress Creek and excavated during and before construction of Ferrell's Bridge Dam at Lake O' the Pines. The Harroun site consisted of four small mounds that were used for burial and/or house construction; their exact function remains unknown (Jelks and Tunnell 1959:61). The Whelan site was very similiar to the Harroun site except no burials were recovered (Davis 1958). These sites typically contain Pease Brushed-Incised along with Bullard Brushed, Ripley Engraved, Taylor Engraved and Maydelle Incised ceramics.

Texarkana Focus (Fulton Aspect)

Most of the sites belonging to this focus are located in Bowie County. However, Jelks reported on the Bluff site (1961:11-41) and the Sherwin Site (1961:55-67) in Cass County. The Hatchel Mound site Bowie County, contained circular house patterns, 4.6 to 7.6 m (15-25 ft) in diameter, with irregularly placed fire pits. Characteristically, Texarkana focus sites contain sand or clay-grit (with occasional small amounts of shell) tempered ceramics such as Barkman Engraved, Avery Engraved, Simms Engraved, McKinney Plain and Pease Brushed-Incised (Wyckoff 1971:146). Also found are Maud and Bassett arrow points, hammered copper bits, and abraders. It has been suggested (Davis 1970:51) that Texarkana focus people may be ancestral to the historic Kadohadacho.

Belcher Focus (Fulton Aspect)

The type site for this focus is the Belcher Mound (components III and IV), Caddo Parish, Louisiana (Webb 1959). Belcher components have been found in Texas at the Taylor site, Harrison County; J.M. Riley site, Upshur County; and the P.S. Cash site, Camp County (Suhm et al. 1954:199; Webb 1959:191). Sites occur with and without mounds and shaft burials. Also found are ceramics of the Belcher Engraved, Hodges Engraved, Glassell Engraved, Taylor Engraved, Avery Engraved, Belcher Ridged, and Karnack Brushed-Incised varieties. Also present are Bassett arrow points.

Titus Focus (Fulton Aspect)

Titus focus sites are the most numerous types known in the east Texas area. To date no major village sites have been excavated, all are cemetery sites (McCormick 1973a; Turner 1978; Sullivan 1977; Cliff et al. 1974:14). Excavations at the W.S. Russell Farm (Titus County) revealed 45 burials with accompanying grave goods. The Tuck Carpenter site, a large Titus focus cemetery, contained 44 burials and yielded a radiocarbon date of A.D. 1590. Titus occupation sites have also been reported at Lake Monticello (McCormick 1973a), at Lake Bob Sandlin (Sullivan 1977), at Lake O' the Pines (Davis and Golden 1960), at Caddo Lake (Gibson 1969) and at the H.R. Taylor site in Harrison County (TARL site files) which to date is the largest Titus focus cemetery excavated. It contained 64 burials. Grave good accompaniment consisted of Ripley Engraved, Taylor Engraved, Bailey Engraved, Wilder Engraved, Karnack Brushed-Incised, LaRue Neck Banded and Harleton Applique ceramics along with Maud and Talco stemless points, ceramic elbow pipes and sandstone celts (Davis 1970:48-50; Wyckoff 1971:177-178).

Kinsloe Focus (Historic Indian)

This localized manifestation has been defined on the basis of seven sites found in Gregg, Harrison, and Rusk Counties. The Kinsloe focus has been identified by Jones (1968:211) as the Nadaco Caddo who lived between the Witchita, Hasinai, Kadohadacho and Natchitoches Confederacies. Ceramic types and burial patterns suggest that the Kinsloe focus may have developed from the Titus focus.

As noted earlier, previous work in the study area suggests occupation in the Archaic period and by Alto, Haley, Whelan, Titus and possibly Kinsloe foci people. Bossier, Texarkana, Belcher, and Allen foci materials (i.e. ceramics) are represented in local collections and in peripheral areas, but are not thought to represent occupations within the study area.

IV. CULTURAL RESOURCES

The preceeding chapters have discussed the overall cultural historical framework for the basin area. It is apparent from this information that the potential is high for finding historic and prehistoric cultural resources in the study area.

A review was made of those cultural resources which have been previously recorded on the National Register of Historic Places, the Log Cabin Register at North Texas State University, the list of Texas Historical Markers, the Texas Register of Historic Places, and in the files of the Texas Archeological Research Laboratory (TARL) and Southern Methodist University (SMU).

No site listed on the National Register of Historic Places is located within either of the two proposed reservoir areas, nor was any found in a review of the Texas Log Cabin Register at North Texas State University and the Texas Register of Historic Places.

A review of the TARL data revealed only one prehistoric archaeological site (41MR53) that has been recorded in the study area with the exclusion of those sites at Lake O' the Pines. The site is located in Marion County on Big Cypress Creek (No. 16 on Figure 3). It is a prehistoric Caddoan site which had 111 small flakes, one piece of fractured gravel, one gravel core and one plain sherd on the surface (TARL site files).

Numerous Texas Historical Commission Markers have been placed at sites which are in or near the study area and seven were observed during field reconnaissance. These markers have been listed in Table 1 and are shown in Figure 3.

Local informants in or near the study area have identified three historic archaeological and four prehistoric archaeological sites in the proposed Black Cypress Reservoir area. In the proposed Marshall Reservoir area informants identified two historic and four prehistoric archaeological sites (Figures 3 and 4).

Informants also described in general numerous historic and prehistoric cultural resources within the study area. Unfortunately, the location of many of these sites remains unknown due to the fact that local informants either would not or could not give us information concerning these resources. Thus, the locations of these sites and

Key for Figure 3

Known Archaeological Sites

1. Hale
2. Keith
3. R.L. Jaggers
4. Mattie Gandy
5. R.A. Watts
6. Tuck Carpenter
7. W.S. Russell
8. Sam Roberts
9. P.S. Cash
10. J.M. Riley
11. Jake Martin
12. Harroun & Dalton
13. Ben McKinney
14. Whelan
15. H.R. Taylor
16. Vicki Lynn No. 1 (TARL Files: 41MR53)
17. Harrison Bayou

THC historical markers

1. Trammels Trace
2. Tarvers Ferry
3. Old Coffeeville and Camp Talley
4. Kellyville
5. First Ice Factory in Texas
6. Jefferson Turn Basin and numerous markers in Jefferson.

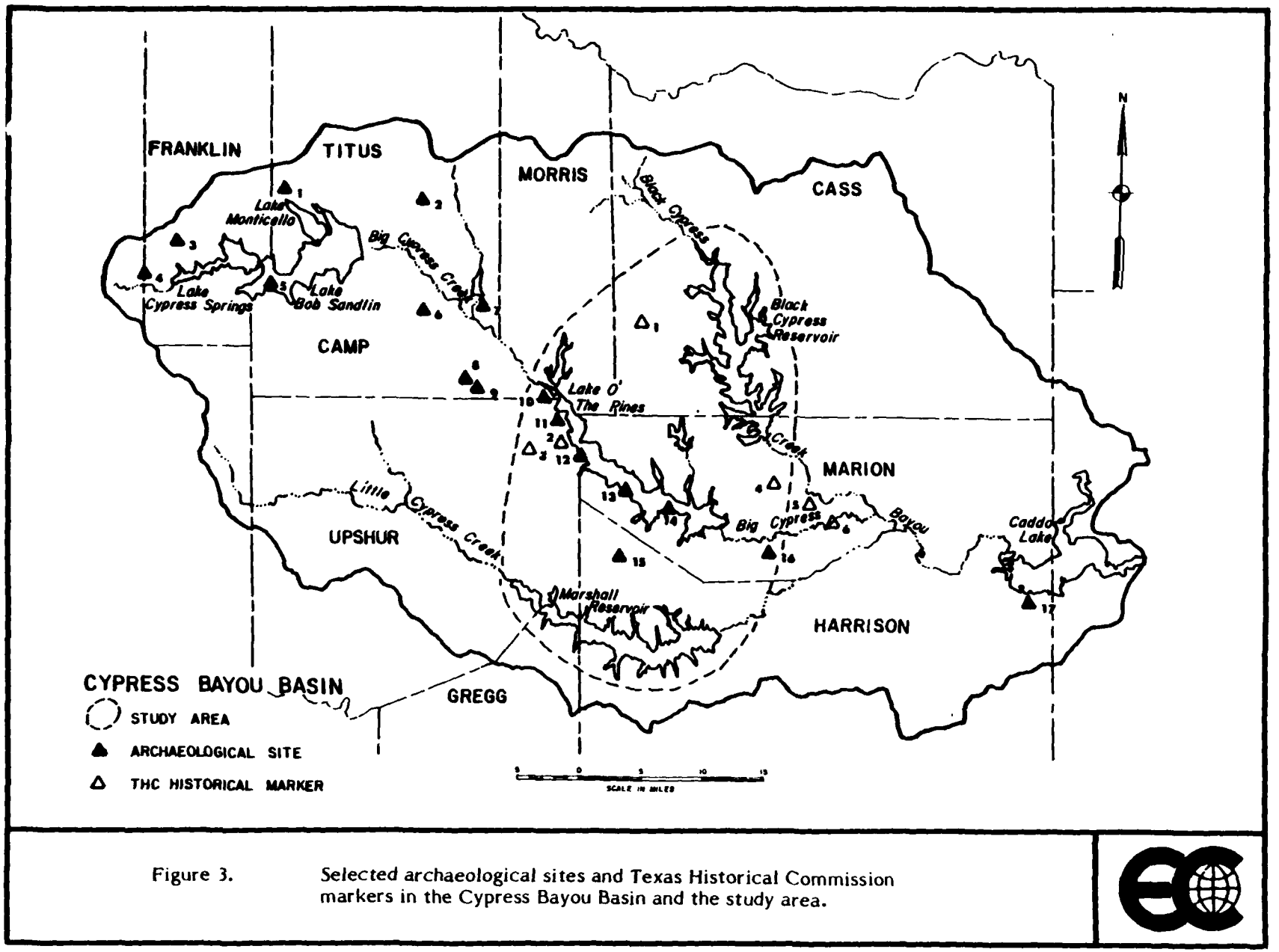


Figure 3. Selected archaeological sites and Texas Historical Commission markers in the Cypress Bayou Basin and the study area.

the integrity of their deposits could not be adequately determined without extensive field work involving reconnaissance of the area in company with informants and further interviews beyond the scope of this study. Likewise, numerous large collections from the study area were reported by informants, and several were observed. However, adequate evaluation of these was precluded by the time constraints of this investigation.

Local informants, collectors and amateur archaeologists have been active in both proposed reservoir areas, but more activity is known for the upper reaches of Black Cypress, Big Cypress and Little Cypress Creeks and the middle segment of the Big Cypress drainage around Lake O' the Pines than other areas of the Cypress Bayou Basin. Intensive activity by local amateurs, and others who can be categorized as looters, has been reported for the Lake Bob Sandlin area. Nine cemeteries (seven Titus focus, or probably Titus focus, one Sanders focus and one Alto focus) were exposed there after the conclusion of archaeological investigations and before the lake filled (Billy Jack Anderson, personal communication). Mr. Anderson (personal communication) stated that most of the burials were at unusual depths. Some single extended inhumations were 2.1 m (7 ft) in depth, while large shaft burials were as deep as 4.6 m (15 ft). This characteristic can be expected at village sites further down the Cypress drainages. Mr. Anderson further stated that there is probably a comparable, or greater, density of sites as that at Lake Bob Sandlin all along Big Cypress Bayou, and its tributaries, to its confluence with the Red River. Mr. Anderson reports that the materials he has observed (and he has seen a substantial portion of the materials recently excavated in the upper portion of the Cypress Basin since he regularly reconstructs pottery for a number of collectors and amateurs) in the Cypress Bayou Basin are overwhelmingly Titus focus, but that Archaic sites and several other Neo-American foci (specifically Sanders and Alto foci) sites are well represented. In the vicinity of the proposed Black Cypress Reservoir, mainstream sites along Black Cypress and Boggy Creeks are reported to be about 75% Archaic with the remainder Neo-American (Ralph R. Nicolas, personal communication). On most other creeks and tributaries there are fewer Archaic sites and an abundance of Neo-American sites. Most knolls and level rises adjacent to tributaries exhibit some ceramics. For example, along one 3.2 km (2 mi) segment of a small tributary of Black Cypress Creek, seven Neo-American cemeteries are known (Ralph R. Nicolas, personal communication). Mr. Nicolas reported that two early trade axes have been found in the study area, one identified as Spanish in origin, and the other French. The French axe was found within the area of

the proposed Black Cypress Reservoir beside the "old Jefferson to Clarksville road" (Ralph R. Nicolas, personal communication). Mr. Nicolas has a large ceramic collection and maintains excavation and map files on a large number of sites in the Cypress Bayou Basin. Mr. Nicolas stated that the specific area of the Black Cypress drainage which will be within the proposed reservoir is not very well known by amateurs, relative to other areas in the drainage, due to the inaccessibility (sparcity of roads) of the area.

A Titus and Texarkana foci mixed assemblage was reportedly recovered from a cemetery just north of Avinger near State Highway 49 and numerous Neo-American cemeteries were exposed in the vicinity of construction at the Lone Star Steel plant and Ellison Creek Reservoir (Robert L. Turner, Jr., personal communication). Numerous Paleo Indian projectile points have been collected in the Cypress Bayou Basin and the types, Plainview, Scottsbluff, Clovis and San Patrice are reportedly common (Robert L. Turner, Jr., and Forrest Murphey, personal communications), and indeed, one or more of these types were observed in all local collections from the study area. One Clovis-fluted specimen was found near Lake O' the Pines reportedly in association with an eroding mammoth skeleton (Forrest Murphey, personal communication), but the site, located in an elevated upland setting, has subsequently been destroyed.

The materials observed in collections reportedly from sites within the vicinity of the proposed Marshall Reservoir were overwhelmingly Titus focus ceramics, predominantly Ripley Engraved type carinated bowls, although Archaic period dart points were also abundant. Neo-American sites of several other foci were also reported to be extant in the proposed Marshall Reservoir, including Haley, Sanders, Bossier and Belcher foci components. Numerous burials were excavated at one reportedly Haley focus site which contained a midden deposit about 61 cm (2 ft) thick and .81 ha (2 acres) in area (Forrest Murphey personal communication). Neo-American component sites are reportedly very abundant on elevations and projections adjacent to several tributaries of Little Cypress Creek within the proposed Marshall Reservoir area, whereas, the flood plain in that area has been little examined by amateurs due to swampy conditions (Billy P. Maloney, personal communication). The ceramic type Pease Brushed-Incised is said to be very common at several of the Neo-American sites in the proposed Marshall Reservoir area (Forrest Murphey, personal communication). The bulk of the ceramics observed on the surface of one site during field reconnaissance in the area were identifiable as Pease Brushed-Incised. Local informants identified many significant

historical resources in the study area, but none were known to exist within the inundation zones of either proposed reservoir. Two sites of National Register quality, the "Old Barnes homeplace" and the "Barnes cotton mill" were examined during field reconnaissance and are immediately adjacent to the proposed Marshall Reservoir, but outside of the impact zone.

All of the proposed Black Cypress Reservoir area north of State Highway 11 is shown on the 1914 edition of the USGS Daingerfield quadrangle. This portion of the reservoir was examined for potentially significant historical features. The only potentially significant features noted within the study area were houses, churches, schools, and cemeteries. One hundred twenty-two houses, one church, two schools and three cemeteries were noted within the area of the proposed reservoir and within an area about 305 m (1000 ft) from the proposed shoreline. Of these, only eight houses were indicated in the area which will be inundated by the proposed reservoir.

The locations of all recorded sites in the study area were transferred onto USGS 15 and 7.5 minute topographic quadrangle maps from the permanent record maps at TARL. Subsequently, the maps were examined for cultural features which may have historical significance. These sites (as well as the recorded sites) are identified and tabulated in Figure 3 and Tables 1-5.

Unlike the Black Cypress Reservoir, no early maps were located for the Marshall Reservoir area or the remainder of the study area. Such data may exist but would require a lengthy search of the files of the National Cartographic Information Center and the United States Geological Survey.

Each structure (both occupied and unoccupied) indicated on the maps, was considered to be potentially significant. Also considered were features (e.g., lakes, railroads, landforms, etc.) which, because of their unique or unusual nature, or inferred ages, might be potentially significant. All communities, churches, and cemeteries were considered to be, or to contain, potentially significant historical data. Sites identified by informants as being culturally significant also were tabulated. It should be noted that none of the cultural features recorded from USGS quad sheets were field checked for significance.

Table 1.
Selected Texas Historical Commission Markers
within or near the study area

THC markers and indicated date of the marked cultural resource	County
Camp Talley 1861	Upshur
Old Coffeeville 1850	Upshur
Tarvers Ferry 1860	Cass
Kellyville 1860	Marion
Jefferson Turn Basin 1844	Marion
Numerous markers in the city of Jefferson ca 1850-1900	Marion
First Ice Factory in Texas 1875	Marion
Trammels Trace 1813	Cass

Table 2.
Cultural features identified from recent
USGS maps within the proposed Marshall Reservoir

Quad reference	High probability areas for prehistoric sites	Occupied structures	Unoccupied structures	Other Features
Ashland, 1962	21	5	3	4.02 km (2.5 mi) of railroad grade
Glenwood, 1960	4	1	0	None
Hallsville, 1961	17	14	2	9 minnow ponds, Rock Lake
Harleton, 1961	16	39	5	Bear Springs Church and Community
Longview Heights, 1962	5	2	0	2 Oil tanks
Marshall N.W., 1962	7	9	3	4.02 km (2.5 mi) of railroad grade
Marshall West, 1962	0	0	0	.54 km (0.33 mi) of old railroad grade

Table 3. Cultural Features in the Vicinity of the proposed Marshall Reservoir

7.5 Minute USGS Quadrangle Map	Features which may be culturally significant, as identified from USGS Maps
Ashland 1962	Old Diana Community
	Jones Cemetery
	Walnut Creek Church
	Simmons Church
	Smyrna Community
	Two unnamed cemeteries
	Davidson Chapel
	Diana Community
	Jones Community and Cemetery
	Ashland Community and Cemetery
	Macedonia Church
	Shady Grove Church and Cemetery
	Morton Community
	Davis Cemetery
Glenwood 1960	Pine Grove Tabernacle
	Valley View School
	Mattox Cemetery
	New Hope Church
	Graceton Community
	Diana Community
	Bethel Community
	Indian Rock Community
	Floyds Cemetery
	Lake Providence Church
	Bethlehem Community and Cemetery
	Glenwood Cemetery and Community
	Woodland Church
	George Cemetery
Hallsville 1961	Mulberry Springs Community
	Carterville Community
	Walker Mill Community
	Evergreen Church
	Noonday Community, Church and Cemetery
	Athens Church
	Mt. Pleasant Cemetery
	Holiness Church
	Springhill Cemetery
	Mission Point Church
	Mt. Pleasant Church
	Hallsville (town)
	Morris Cemetery
	Bucksville Church and Cemetery

Table 3. (Cont.)

7.5 Minute USGS Quadrangle Map	Features which may be culturally significant, as identified from USGS Maps
Harleton 1961	Macedonia Community, Church and Cemetery Lodwill Church Jackson Community Liberty Cemetery Smyrna Church Hope Springs Cemetery Piney Church and Cemetery Oak Grove Church Harleton Community Eagle Creek Cemetery Center Cemetery
Longview Heights 1962	Pleasant Hill School Hebron Church and Cemetery Forest Hill Church Summerfield Church Alpine Church and Cemetery La Grones Church Lilly Hill Church and Cemetery Macedonia Church Free Holiness Church Lewis Chapel Ray Cemetery Winterfield Church Mason Spring Church Hope Cemetery
Marshall N.W. 1962	Mt. Pleasant Church Brantly Cemetery New Zion Cemetery Meadows Cemetery Goodwill Church New Hope Church Friendly School St. Mark Church Clever Cemetery Hickory Grove Church Evergreen Church St. James Church and Cemetery

Table 4. Cultural Features* within the proposed Black Cypress Reservoir

Quad reference	High probability areas for prehistoric sites	Occupied structures	Unoccupied structures	Other Features
Avinger, 1962	16	2	3	4.02 km (2.5 mi) of Louisiana & Arkansas Railroad, Turkey Creek community and cemetery, Pruitt Lake Church, 2 borrow pits along LA & A Railroad, 1 roadside park between Avinger and Turkey Creek
Carterville, 1969	10	5	9	Ca 7 miles of old railroad grade
Cunningham Creek, 1961	2	9	2	Flat Creek Bridge (State 11), Blue Lake, Pruitt Lake, Hughes Lake, Lacey Bridge, Wallace Lake Barnes Lake
Kellyville, 1962	14	0	0	None
Lassater, 1961	0	0	0	None
Marietta, 1965	2	0	0	None
Sardis, 1965	24	3	3	None

*Identified from recent USGS maps.

Table 5. Cultural Features in the Vicinity of the proposed Black Cypress Reservoir

7.5 Minute USGS Quadrangle Map	Features which may be culturally significant, as identified from USGS Maps
Avinger 1962	City of Avinger Love Community and Cemetery Turkey Creek Community, Church and Cemetery Pruitt Lake Cemetery City of Avinger
Carterville 1969	Hickory Grove Cemetery Almira Community Corinth Church (southeast of Almira) Bethel-Cass Church (south of Almira) Boon Cemetery (northeast of Carterville) Carterville Community Warren Springs Community Two unnamed cemeteries at Warren Springs Unnamed mills at Warren Springs Unnamed strip mine (north of Warren Springs) Pleasant Hill Community, Community Center and Cemetery City of Linden Mill Creek Church (west of Linden) Concord Cemetery Antioch Church
Cunningham Creek 1961	Caves Spring Community Wells Cemetery and Church (in Caves Spring) Caves Spring Church and Cemetery (northwest of Caves Spring) Fairview Community Flag Pond (natural upland lake) Bear Creek Community and Church Cemetery in Bear Creek Community Bear Creek Cemetery (southeast of Bear Creek Community) Liberty Community Simmons Cemetery (south-southeast of Liberty) Liberty Church (southwest of Liberty) Bethlehem Church and Cemetery Antioch Church
Kellyville 1962	White Oak Community Shady Grove Church Sarber Community Beamer-Davis Cemetery Berea Community, Church and Cemetery Jefferson Rural Academy Valley Plains Cemetery

Table 5. (Cont.)

7.5 Minute USGS Quadrangle Map	Features which may be culturally significant, as identified from USGS Maps
Kellyville 1962 (cont.)	Unnamed cemetery (across road from Valley Plains Cemetery) Burford Community (on L & A Railroad) Kellyville Community Kellyville Siding (on L & A Railroad) Two unnamed cemeteries near Kellyville Siding Webb Cemetery Morning Star Church
Lassater 1961	Pyland Cemetery Orrs (on L & A Railroad north of Lassater) City of Lassater Adams Chapel Victory Community and School Rock Springs Community Locks Mountain (landmark) Warlock Community Mims Chapel Unnamed church and cemetery (betwen Mims Chapel and Warlock Community)
Marietta 1965	Bell Cemetery (near Bryans Mill) Dalton Community Creekmore Cemetery (near Dalton) Unnamed cemetery (south of Dalton) New Hope Cemetery and School City of Marietta Bethlehem Community, Church and Cemetery Nickleberry Community (near Bethlehem) Cornett Community, Church and Cemetery
Sardis 1965	Flat Creek Cemetery Pine Bluff Church and Cemetery Midway Community Friendship Church and Cemetery Crossroads Community and Community Center Dennis Cemetery (east of Crossroads) Union Hill Church and Cemetery Old Union Hill Cemetery Union Hill (landmark) Union Hill Lookout Tower (on Union Hill) Rankin Cemetery (southwest of Union Hill) Sardis Community, Church and Cemetery City of Hughes Springs

Table 6.
List of Informants and collectors

*	Anderson, Mr. Billy Jack 2004 East 1st Street Mt. Pleasant, Texas 214/572/2601	Artifact collector, Black Cypress, Titus Focus burial items
	Anderson, Mr. Billy L. Argo Rural Route Mt. Pleasant, Texas 214/572/2236	
	Arnauld, Mr. Kelly Myrtlewood Drive Marshall, Texas 75670 214/938/2200	
	Barnes, Mr. Clarence Fulton Street Marshall, Texas 75670	
	Barnes, Mr. W. Roy Victory Drive Marshall, Texas 75670 214/935/3395	
*	Belding, Mrs. Paul, Chairperson Gregg County Historical Commission Longview, Texas 214/753/4534 214/753/7269	
*	Bruseth, Ms. Toni Turner Archaeology Research Program Department of Anthropology Southern Methodist University Dallas, Texas 75275 214/692/2942	
*	Burkhart, Mr. Houston Rural Route-West I-30 Mt. Pleasant, Texas 214/524/2592	Artifact collector Cypress Basin, ceramic collection on display at Mesquite High School, Mesquite, Texas
*	Cole, Ms. Thacker, Chairperson Upshur County Historical Commission Gilmer, Texas 214/843/3815	

Table 6. (Cont.)

Cowles, Mr. Nelson
Rt. 7 - Del Monte Lane
Longview, Texas

* Danvers, Ms. Rebecca, Curator
Historical Collection
North Texas State University
Denton, Texas 76201

* Deware, Mr. Jessie, IV, Chairperson
Marion County Historical Commission
Jefferson, Texas
214/665/2567
214/665/2320

* Donnelly, Mr. Jay
USGS Office -Federal Building
Dallas, Texas 75202
214/767/0198

* Felker, Mr. Bud
Avinger, Texas

Hargrave, Mr. Gerald, Attendant
Irvin Arco Service Station
Daingerfield, Texas

* Hill, Mr. Bennett, Chairperson
Cass County Historical Commission
Linden, Texas
214/756/5071

* Judge, Titus County
Titus County Courthouse
Mt. Pleasant, Texas
214/572/3791

* Kemper, Mr. Lyle, Director
National Cartographic Information Center
Denver, Colorado
303/234/2326

* Lale, Mr. Max, Chairperson
Harrison County Historical Commission
Marshall, Texas
214/938/2579

* Maloney, Mr. Billy P.
Port Caddo Road - Hwy. 43
Marshall, Texas 75670
214/935/2683

Artifact collector
Marshall Reservoir, Archaic,
Neo-American artifacts

Table 6. (Cont.)

	Maughon, Mr. Sid Gilmer, Texas	
*	McMinn, Ms. Harris, Chairperson Camp County Historical Commission Pittsburg, Texas 214/856/5527	
	Mc Williams, Mr. Jim Route 1 - Box 49 Hallsville, Texas 75650	
*	Murphey, Mr. Forrest Rt.3 - Box 60 - Myrtlewood Drive Marshall, Texas 75760 214/935/3539	Artifact collector Cypress Basin, Paleo Indian materials
*	Nicolas, Mr. Ralph R. 901 Coffee Street Daingerfield, Texas 214/645/3325	Artifact collector Black cypress, Archaic, Neo-American artifacts
	Price, Mr. L. B. (Bogie) Atlanta, Texas	Artifact collector, type unknown
*	Ramaekers, Ms. Kristine Historical Collection North Texas State University Denton, Texas 76201	
	Ramey, Mr. Jack Daingerfield, Texas	
*	Smith, Ms. Allie, Chairperson Morris County Historical Commission Omaha, Texas 214/884/2139	
*	Steed, Mrs. Marie Rural Route Avinger, Texas 214/562/1378	
*	Turner, Mr. Robert L. 5913 Sycamore Creek Road Fort Worth, Texas 76139 817/293/1187	Regional archaeology Cypress Basin (Tuck Carpenter and R.A. Watts Site collections)

Table 6. (Cont.)

* Webb, Dr. Clarence H. Shreveport Children's Clinic Shreveport, Louisiana 318/868/1624 - Office 318/222/9698 - Home	Regional archaeology
Wicker, Mr. Terry Texas Forestry Service Linden, Texas	

* indicates informants interviewed personally or by telephone.

As previously mentioned every cultural feature has the potential of being significant. Many of the unoccupied structures on USGS maps are barns (old and new) and old houses which have been abandoned or converted into barns. The latter would be historically significant. When examining maps that were printed over 50 years ago, every structure becomes significant under the 50 year arbitrary recording rule. In many cases maps of this nature exhibit standing structures which are no longer extant, thus identifying an historical archaeological site that could be overlooked during a field reconnaissance of the area. These maps also exhibit land forms which may indicate high probability areas for prehistoric sites because of elevation or close proximity to water.

Basically, there are four different physical types of sites which have been found and recorded, and which can be expected to be found within the study area by conventional survey methods. First, there are surface scatters of historic debris such as ceramics, bricks, glass, and metal which represent the historic archaeological remains of industrial sites, plantations, homesteads, outposts and communities. Frequently, associated with the surface manifestations will be subsurface remains of building foundations and pits such as wells, burials, privies and cellars. Secondly are surface scatters of artifacts such as lithic debris and potsherds uncovered in eroded areas or on the surface of rodent backdirt piles. Frequently, associated with the surface manifestations will be subsurface concentrations of artifacts within discernable features such as middens, burials, hearths, house areas, and assorted types of pits. In addition, there are often subsurface concentrations of artifacts which are not associated with discernable features. The middens can often be recognized by changes in soil coloration of exposed surfaces and of gopher backdirt piles (they are often also discernable in high resolution aerial photography of plowed fields). Thirdly, there are structural features observable on the surface of sites such as mounds, midden mounds, wells, building piers and foundations, etc. Subsurface features are usually associated with these sites. The deposits of sites demonstrating surface structural features (at least the deposits associated with the features) are usually better preserved or less damaged relative to deposits at sites without such features. Finally are historic standing structures which are more than 50 years old. Sites of this nature will include plantations or farming complexes (i.e., houses, sheds and barns), tenant houses, industrial sites, churches, and institutional sites.

Within the proposed reservoir impact zones, it is hypothesized that prehistoric sites will range in size from isolated surface artifact finds to sites of more than 2 ha (4.94 acres)

containing numerous subsurface features. High surface and subsurface artifact densities are also expected. Historic sites are expected to range in area from specific activity areas of very small dimensions (e.g., still foundations, washing or bathing localities, etc.) to farming complexes of many hectares, containing several structures and various features and special activity areas.

Local informants are valuable sources of useful information concerning the cultural resources. Accordingly, an attempt was made to contact and interview as many informants as possible and to develop a list of potential informants for later investigation in the study area. The chairperson of each county historical commission in the eight counties where the study area is located was contacted and interviewed. Each informant interviewed (identified with an asterisk in Table 6) was asked to identify any cultural resources known in the study area and to supply names of other persons who might be able to provide useful and specific information concerning the locations of cultural resources. The informants were generally helpful and cooperative. They demonstrated that numerous sources exist for historical data on the study area. In fact, historical materials available in local libraries and private collections are so voluminous that they could not be dealt with effectively within the constraints of this investigation. Most of the materials are not available elsewhere and to evaluate them would require lengthy fieldwork in the study area libraries and collections. This is also true of the wealth of data on the archaeology of the area in local collections and waiting in the minds and files (some of the local collectors are very organized) of local amateur archaeologists and collectors.

V. PREDICTIONS

It is expected that the Marshall and Black Cypress Reservoir areas will encompass a sample of the archaeological resources in the region which will illustrate the range and variety of those resources present, with the exception of Paleo Indian period sites and certain types of historic Anglo sites (e.g., communities and certain industrial, institutional and religious sites). Based on archaeological studies at Lake Bob Sandlin (Sullivan 1977), Lake Monticello (McCormick 1973a) and past experience, we predict that there will be an average of one site (including both prehistoric and historic archaeological) per 29.5 ha (73 acres) at Marshall and Black Cypress Reservoirs. Bob Sandlin and Monticello Reservoirs were chosen because of their similar environmental settings (i.e. watershed location) to Black Cypress and Marshall Reservoirs. Within the study area we see two variables in regard to prediction of site locations: (1) areas of high probability for prehistoric (e.g., flood plain knolls, terraces, natural lake margins and upland projections, etc.) (See Figures 4 and 5) and historic (e.g., upland bases, edges and projections and large flood plain knolls) sites, and (2) areas of low probability (this includes flood plains, slopes and all other areas not within a high probability zone).

Two other factors (ground visibility and age) which may affect site density predictions should also be noted. Due to the dense vegetation and virtual absence of erosion and cultivation it was estimated from a field inspection that only 25 percent of the sites located within the proposed Marshall Reservoir area would be found. The same is true of the proposed Black Cypress Reservoir area except that the vegetation is slightly denser and will reduce the recovery rate to 20 percent. Site age will also affect the number of each class of site present within the study area.

Predictive Model for Historic Settlement

As a general rule, historic sites are not located in areas of low elevation which are subject to periodic inundation. The majority of the proposed Black Cypress and Marshall Reservoirs contain flood plain like areas, but very little upland. Therefore, we propose a predictive historic settlement model which hypothesizes that historic sites will be located primarily in upland settings. The majority of these will be on the upland proper with fewer sites present on upland edges, projections, flood plain knolls or near the bases of upland slopes. Since upland topographic features are present in small

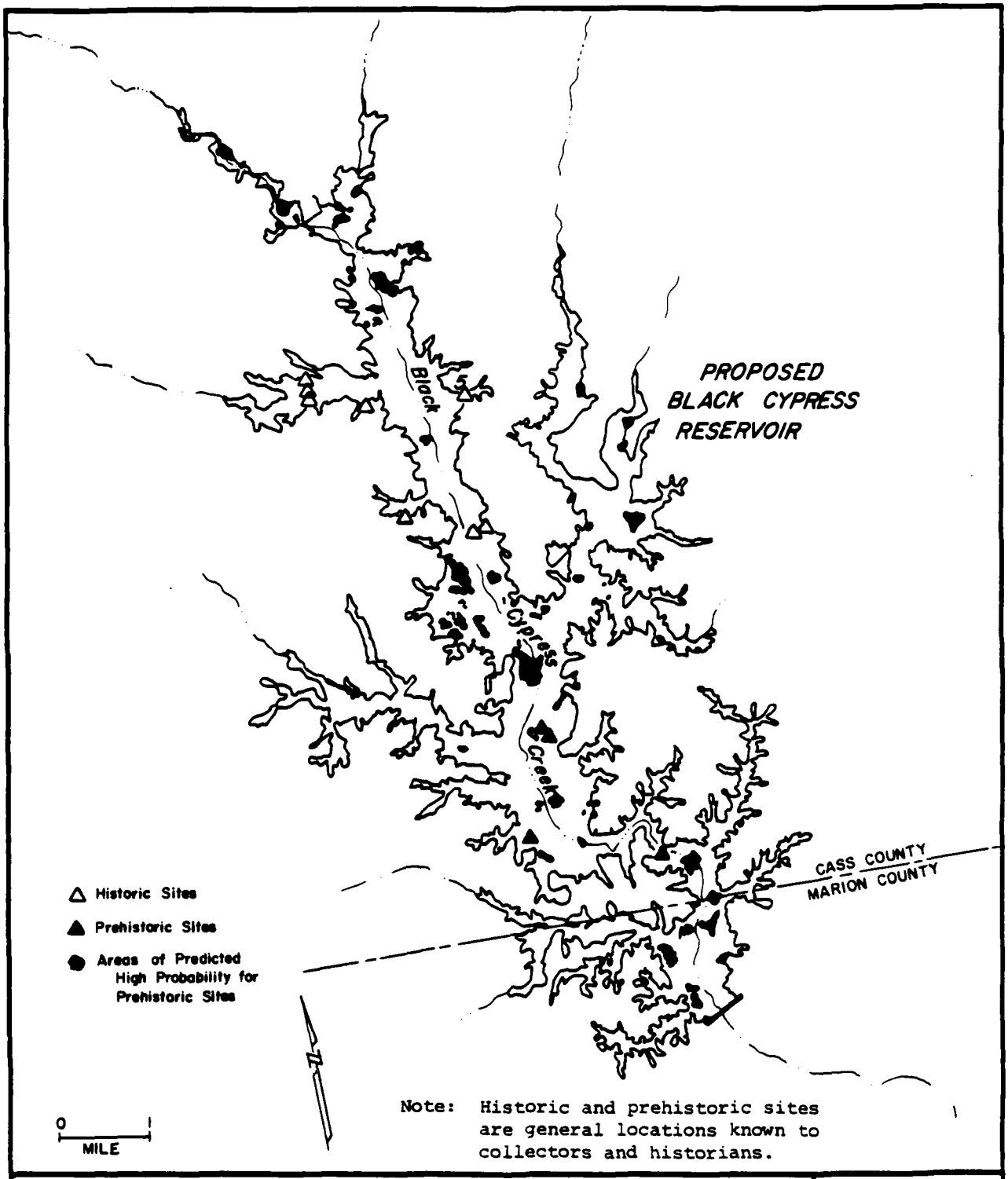


Figure 4. Known cultural resources and high probability areas within the proposed Black Cypress Reservoir.

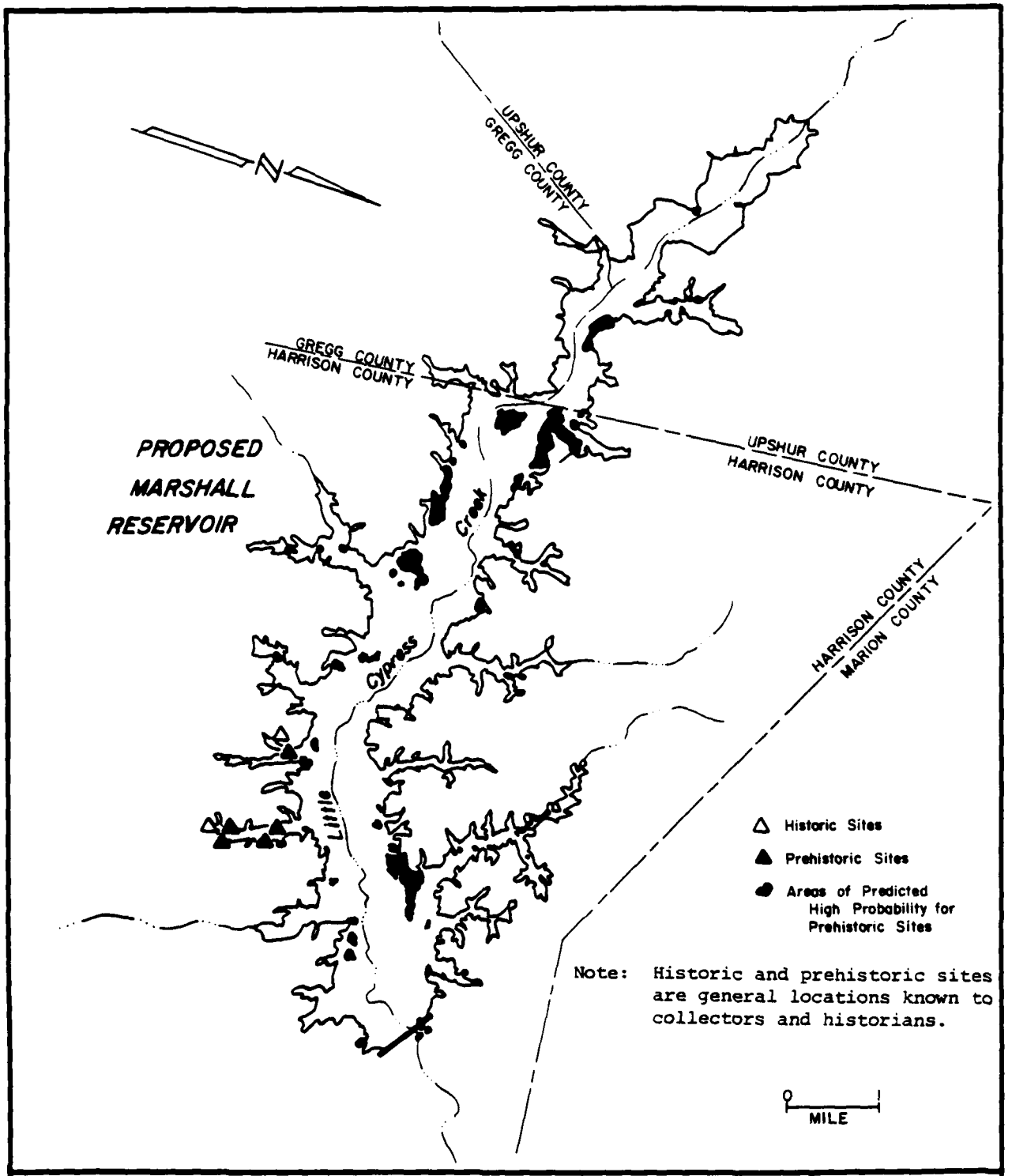


Figure 5. Known cultural resources and high probability areas within the proposed Marshall Reservoir.

amounts within the proposed project area, it is expected that very few historical sites will be found. Furthermore, few to no significant historical standing structures are expected to be extant within the inundation zones of the proposed reservoirs. It is expected that the major Anglo settlements will be located out of the project area.

A recent archaeological survey which was conducted in conjunction with mine studies near Troup, Texas (Skinner et al. 1981) stresses the point that historical sites are primarily located in upland type settings away from areas that are subject to flooding. Archaeological surveys in conjunction with reservoir studies at Bob Sandlin (Sullivan 1977); Lake Monticello (McCormick 1973a) and Lake Swanano (McCormick 1973b) also agree with this statement.

Predictive Model for Prehistoric Settlement

We expect to find small hamlet settlements and activity specific sites located near the tributaries that feed Black Cypress and Little Cypress Bayous. As previously mentioned in the Native American Occupation section there was a population dispersal with a relocation along tributaries during Sanders and Haley focus times. Large villages which represent a more sedentary life style will be situated on wide knolls and flood plain projections near main streams. Older sites belonging to Paleo Indian and Archaic times will be located at higher elevations (T2 and T3 terraces) and a greater distance from present day stream channels than later Neo-American and Historic Aboriginal sites. This was also the case at Troup (Skinner et al. 1981) and Lake Bob Sandlin (Sullivan 1977).

Based on the sources previously mentioned we predict that a total of 438 archaeological sites are present within the Marshall Reservoir (one site per 29.5 ha, or 73 acres). This proposed reservoir will contain 12,950 ha (32,000 acres). Of these, 518 ha (1,280 acres) (4%) are designated as high probability areas for prehistoric sites, while 129.5 ha (320 acres) (1%) are designated as high probability areas for historic sites. The high probability areas are expected to contain about one-half of all extant sites, that is, they would be about ten times as likely to contain sites as the same area of a low probability zone. Using these estimates (i.e., 40% of prehistoric sites and 10% of historic sites are located in high probability areas) we expect 175 prehistoric sites and 44 historic sites to be extant within the high probability areas and the remaining one-half, or 219 of the sites, to be located in low probability areas. As mentioned before, because of the

dense vegetation, only 25% of the extant sites are expected to be located using conventional survey methods. Therefore, 110 total sites are expected to be located using conventional methods: 44 prehistoric sites and 11 historic sites in high probability areas, and 55 undifferentiated sites in low probability areas.

Using the same predictive format for Black Cypress Reservoir, which would contain 14,083 ha (34,800 acres), we would expect to find a total of 95 sites with a discovery rate of 20%: 38 prehistoric sites and 10 historic sites in high probability areas and 47 undifferentiated sites in low probability areas.

In summation, we predict there are 915 extant sites located in the two proposed reservoir areas (438 in Marshall and 477 in Black Cypress) of which 205 will be located using conventional survey methods (110 in Marshall and 95 in Black Cypress).

VI. RECOMMENDATIONS

ECI recommends that a comprehensive cultural resources survey of the proposed Black Cypress and Marshall Reservoir areas be conducted. A non-exclusive comprehensive deployed survey with limited shovel testing should be conducted before dam construction (McGimsey and Davis 1977; King 1978). Implementation of this survey method would: (1) insure complete project ground coverage, (2) not bias the sample to only prehistoric resources as opposed to historic, and (3) allow for varying survey intensities depending upon terrain and ground cover which will in turn affect the probability of locating all archaeological sites in the project area (King 1978:35). Limited sub-surface testing should also be utilized at various intensities depending upon cover and each area's probability for containing sites.

The major problem which hinders surveys in east Texas is the dense ground cover of leaves, needles, grass and vegetation. Both proposed project areas are heavily wooded with pine, oak, hickory and underbrush. The areas which have once been timbered or cleared and then abandoned are now again heavily vegetated. We recommend that limited shovel testing be conducted within the proposed reservoirs in order to locate buried or unexposed deposits. This should be done concurrently with field survey. Shovel testing as described by Lovis (1976) should be done where the soils, depositional regimen, and ground cover warrant its use. Both of the proposed reservoirs are located in areas of dense vegetation and heavy alluviation. Both of these factors greatly obscure ground visibility and hinder site discovery. In order to locate and evaluate sites that may not be visibile from surface observations, we recommend that shovel testing be used only in a problematic and not a systematic manner throughout the project areas.

Systematic shovel testing is a very time consuming and costly operation. We feel that this method would probably not be feasible for the entire project area, but should be implemented in a problematic sense in areas where there is a high probability of site occurrence. Recent studies at the Dallas Floodway (Judd 1981) have shown that systematic shovel testing in flood plain areas is generally unproductive. It should be noted that even though we do not recommend this method, in most cases it "is the best way of providing a professional assessment of the toital project area's cultural resources, and that is the responsibility of the contracting archaeologist" (Woodall

1981:6-10). It would also be preferable to revisit all areas that will have been cleared of vegetation to serve as a check on the efficiency of the survey methods.

Once sites have been located it will be important to define their horizontal extent and the depth of the deposit. A variety of methods are currently available for definition and these generally include test pitting, postholing and plowing. Test pitting is an ideal technique that generally provides a representative artifact sample plus definition of natural and cultural stratigraphy. However, it is also the most time-consuming technique. Plowing site areas in order to expose artifacts in the plow zone provides the best picture of buried deposits (Bruseth et al. nd.). Through the use of controlled artifact collection and computer mapping, it is possible to prepare contour maps which show artifact concentrations. However, this technique is most applicable for planning a major excavation strategy and is not very useful in largely timbered areas such as the study area. While modification of this technique has been adapted to timbered areas by New World Research, Inc. (Campbell et al. 1980:26-28), we do not find its use necessary, nor do we believe it to be the most efficient method, for locating sites in this study area.

ECI recommends that systematic shovel testing and/or postholing be used as the most effective way to define site limits. Transect interval sampling has been recommended as an alternative technique (Chartkoff 1978), but our experience has shown that shovel testing shallow deposits and postholing deeper ones using a systematic patterned approach provides the best results for describing site deposits. We have used this technique in central Texas (Bandy et al. 1981:22-28) and the results predicted site deposit depth, extent and organization more quickly than test pitting would have and with results which were verified by subsequent excavation. With the use of a power posthole digger, this procedure can be very efficient and will provide the most reliable information while doing the least damage to buried cultural deposits.

A slight possibility exists that deeply buried sites are located in the flood plains of the inundation zones of the proposed reservoirs, but it is not expected that conventional survey methods would reveal these.

In any event, procedures are not now extant within the panoply of archaeological methods to allow certain or economical determination of the presence or absence of deeply buried sites. This is certainly not meant to imply that such procedures cannot or

should not be developed, but simply that the economics of such attempts are presently questionable. It is felt that budgeting significant portions of the monies available for archaeological research toward determining the presence or absence of deeply buried sites would not be warranted and would constitute an adverse impact to those resources which are known, or can be expected to be, manageable. This is particularly true in the Cypress Bayou flood plains were it is believed that recent alluvium is of considerable depth. White states that the flood plain soils in the study area

> are the result of the erosion of materials from the higher slopes into the flood plains. Each year during the high water period these areas are inundated and a thin covering of silt is deposited. Geologically, these alluvial soils are of recent origin and reflect in part, where they are deeper than might be expected, the presence of the Great Raft in the Red River. Due to the obstruction of the Red River and most of its tributaries by this accumulation of logs, deposition has occurred which is greater than is presently normal. In some places in the valley of the Red River, in the vicinity of the Raft, deposits of 25 ft are not uncommon (White 1964:18).

Although it is not known if deposits resultant from the raft exist in the flood plains of the proposed reservoir areas, or their depth if they do exist, it is believed that substantial alluvium has accumulated in the flood plains of the study area since Paleo Indian times.

We recommend that an experienced and professional geomorphologist study the implications of flood plain alluviation in the study area and its relationship to possibilities of deeply buried sites. In addition, it is recommended that the geomorphological study explore the effects that the Red River raft had on alluviation and flood plain sites in the study area. The results of these studies should be incorporated into the design of the recommended cultural resources survey.

Inundation Impact Effects

The exact effects of inundation (mechanical and chemical) on archaeological resources, whether positive or negative, remains somewhat obscure. The impact of reservoir projects "cannot be adequately assessed and mitigated, because the archaeological profession admittedly cannot provide systematic data to serve as criteria for intelligent

decision making regarding this issue" (Lenihan et al. 1977). A reservoir inundation study "is an extremely complex undertaking, which requires archeologists conducting the research to assimilate a large amount of data in sciences and specialty areas very differse from their own and apply it to an archeological complex" (Lenihan et al. 1977:ii). However, there are two overwhelming realities of misconception pertaining to water impoundment. The first is that inudation is synonomous with preservation. While in some cases this may be true, we obviously should not "flood all the sites for posterity" (Garrison 1977:151). The second is that the effects of inundation render a site to the point of where it is of no value, thus becoming useless. Unfortunately water impoundment projects do create mechanical and chemical impacts. Mechanical impacts destroy the archaeological context by rearranging deposits and artifacts, thus eliminating the utility of spatial analysis. Chemical impacts destroy the cultural integrity of the soil, plus osteological and floral remains. However, the ultimate effects of both types of impact would depend upon the original composition of the site.

In the two proposed reservoirs, two areas will be affected directly by inundation: (1) the conservation pool, and (2) the flood pool. Even though two inundation impact zones are recognized, it is felt that the effects of each will be essentially the same. In some cases sites located within the conservation pool may be "flooded for posterity" (Garrison 1975:151). Silt will cover many of the sites located within the pool area, thus protecting them from natural destructive agents (e.g., washing). However, many sites will be destroyed by the very action which will preserve others. Past studies have shown that in many areas sediments which are inundated will be washed away to a depth where an impermeable surface is reached and redeposited further down stream. This will result in the stripping of many sites and redeposition of the soil, thus destroying the archaeological context.

Past studies have also shown that sites located at elevations 3.0 to 4.5 m (10 to 15 ft) below the conservation pool level will be destroyed. Sites located within the flood pool area may in fact never be permanently impacted. However, in certain situations the sites may be placed in danger. During flood stages, for example, the effects of washing due to wave action and current may impact sites not normally inundated. Likewise, recreational activities such as camping which occur near lake edges may have adverse effects on otherwise minimally impacted sites. As previously mentioned, the degree to which a site will be impacted will depend largely upon the site content and location.

The exact number, type, location and impact effects of sites which are located within the project area cannot be determined without extensive fieldwork which is beyond the scope of this project. It must be assumed that those sites within the project impact boundaries will be considerably altered or destroyed by primary impacts such as inundation and construction activities or secondary impacts such as recreation. Impact intensity will be the same in both proposed reservoir areas, and will differ only in the total site number affected and the individual integrity of each site found. Under any circumstances the optimal option is preservation by avoidance.

Conclusion

This overview study has indicated that a wealth of useful historical data exists on the study area and that much of the information is contained in local informants, libraries and collections. In addition, numerous collectors and amateur archaeologists have collections and information relating specifically to the proposed reservoir areas. Therefore, it is recommended that an intensive survey of collections and documentary sources and an intensive oral history project precede the recommended cultural resources survey. In addition, the recommended cultural resources survey should be prefaced by intensive interviews of local informants, collectors and amateur archaeologists coupled with reconnaissance of reported sites. If possible, this should be done in company with persons who can identify specific locations. Several local collectors maintain map records of site locations. The collections and documentary survey should include, but not be limited to, evaluation analysis of: local historical collections, local artifact collections, records of local collectors and amateur archaeologists, local libraries, all available USGS data and maps, deed records, all available aerial photography (particularly the early series available at many local ASCS and SCS offices), U.S. Census data, County Commissioners Court minutes, and early land ownership maps. The collection and analysis of this data is necessary to formulate valid research designs for the recommended archaeological reconnaissance, oral history project and cultural resources survey.

Once the prefield work mentioned in the preceding text has been completed, ECI recommends that the non-exclusive comprehensive survey be conducted using 30 m transect intervals with problematic shovel testing. The 100%, 30 m transect spacing would insure complete ground coverage and a more representative sample of those cultural resources present within the study area than a stratified strata quadrat sample

would yield. Our own experience has shown that in areas of dense vegetation the greater the transect interval, the greater the error in transect alignment control. Problamatic shovel testing should be utilized concurrently with the survey in areas of high probability (as previously discussed) to minimize the possibility of overlooking buried sites or those obscured by heavy vegetation.

A tentative schedule of person-days per reservoir study area is proposed below:

Pre-Field

As previously mentioned a wealth of material remains to be collected in the local museums, newspapers (Appendix A) and in the minds of collectors, historians and local residents. It is felt that the prefield step of this phase could be completed within approximately 160 person-hours (20 person-days for two qualified researchers). The data obtained should be directly integrated into the Field Survey phase in order to aid survey teams in locating and evaluating sites. This research would be ongoing in conjunction with the field work by a team of researchers until the task was completed.

Field Work

The total project will encompass 27,033 ha (66,800 acres), including 12,950 ha (32,000 acres) at Marshall Reservoir and 14,083 ha (34,800 acres) at Black Cypress Reservoir.

Based on the proposed 30 m transect interval it is felt that approximately 20¼ ha (50 acres) per person-day can be achieved. The following time and effort estimates are presented for the entire project:

	Person-Days
Pre-Field	
Background work for Marshall and Black Cypress Reservoir	20
Field Work	
(1) Marshall Reservoir - 12,950 ha (32,000 acres); projected 30 m interval will allow ground coverage of ca 20¼ ha (50 acres) per person-day	640

(2)	Black Cypress Reservoir - 14,083 ha (34,800 acres); projected 30 m interval will allow ground coverage ca 20¼ ha (50 acres) per person-day	696
(3)	Informant and Historical Research Team	
	Documentation	675
	Interviews	450
(4)	Laboratory Analysis and Processing. Based on 438 sites, 3,000 total artifacts (limited diagnostic collecting), 400 artifacts per day processing	8

In essence total pre-field, field and laboratory work will take approximately 2,489 person-days excluding draft report preparation for each reservoir.

In summary, it is recommended that an intensive on foot archaeological survey of the proposed reservoir areas be conducted after the recommended collections, documentary, oral history and archaeological reconnaissance surveys have been completed and before dam construction begins. Cultural resources which are found to be present should be tested to define their limits and, when significant, appropriately mitigated before inundation.

VII. BIBLIOGRAPHY

Anderson, Keith M.
1972 Archaeological resources of Lake Palestine, Texas. Southern Methodist University, Archaeology Research Program, Research Report 11.

Anderson, Keith M., Kathleen Gilmore, Olin F. McCormick III and E. Pierre Morenon
1974 Archaeological investigations at Lake Palestine, Texas. Southern Methodist University, Contributions in Anthropology 11.

Austin, Stephen F.
1837 Map of Texas with parts of adjoining states. Map on file in Texas Collection, Barker History Center, The University of Texas at Austin.

Bandy, Philip A., S. Alan Skinner, Allen Faust, Toni Turner, and Bonnie Yates
1981 Archaeological excavations at Yellow Jacket Shelter, Comanche County, Texas. Environment Consultants, Inc., Cultural Resources Report 80-17.

Barrow, John
1849 Facts relating to northeastern Texas, condensed from notes made during a tour through that portion of the United States of America, for the purpose of examining the country, as a field for emigration. Simpkin, Marshall and Company, London.

Belding, Mrs. Paul
1981 Personal communication. Longview, Texas.

Brown, K.M.
1971 The Keith site (41TT11) Titus County, Texas. Unpublished paper presented at the Texas Archeological Society Meeting.

1976 Fused volcanic glass from the Manning formation. Bulletin of the Texas Archeological Society 47:189-207.

Bruseth, J.E.
1976 Archaeological reconnaissance of the FEA pipeline. Southern Methodist University, Archaeology Research Program, Research Report 86.

Bruseth, J.E., J.T. Bagot, K.M. Banks, and M.A. McKinley
1977 Archaeological research at Lake Fork Reservoir: site inventory and assessment. Southern Methodist University, Archaeology Research Program, Research Report 87.

Bruseth, James E., Timothy K. Perttula and B. D. Skiles
n.d. Archaeological research at Lake Fork Reservoir: report of the 1978 field season. Southern Methodist University, Archaeology Research Program, Research Report.

Campbell, Janice L., Thomas D. Montagne, Mark T. Swanson, Prentice M. Thomas, Jr., and Carol S. Weed
1980 Archaeological testing at seven sites in Fancy Hill area, Montgomery County, Arkansas. New World Research, Inc.

Chartkoff, Joseph !.
1978 Transect interval sampling in forests. American Antiquity 43(1):46-52.

Cliff, M., C. Carter, and L. Verrett
1974 Archaeological survey of the Welsh Power Plant. Southern Methodist University, Archaeology Research Program, Research Report 74.

Confederate News, Jefferson, Texas
1862 Article concerning the importance of Jefferson as an Inland Port during the Civil War blockade of Gulf Ports.

Daily Jimplecute, Jefferson, Texas
1876-Present Various articles concerning the establishment of the town of Jefferson, Jefferson, Texas.

Davis, E.M.
1958 The Whelan site, a late Caddoan component in the Ferrell's Bridge Reservoir, northeastern Texas. Manuscript report submitted to the National Park Service by the Division of Research in Anthropology, The University of Texas, Austin.

Davis, E.M., and J.R. Gipson
1960 The Dalton Site, a late Caddoan mound site in Ferrell's Bridge Reservoir area, northeastern Texas. Manuscript report submitted to the National Park Service by the Division of Research in Anthropology, The University of Texas, Austin.

Davis, E.M., and Bernard Golden
1960 The Ben McKinney site, a Titus focus site in the Ferrell's Bridge area, northeastern Texas. Manuscript report submitted to the National Park Service by the Division of Research in Anthropology, The University of Texas at Austin.

Davis, Hester A. (editor)
1970 Archeological and historical resources of the Red River basin. Arkansas Archeological Survey, Publications on Archeology, Research Series 1.

Davis, W.A. and E.M. Davis
1960 The Jake Martin site, an Archaic site in the Ferrell's Bridge Reservoir area, northeastern Texas. University of Texas, Department of Anthropology, Archaeology Series 3.

DeWare, Jesse
1981 Personal communication. Jefferson, Texas.

Dillehay, Tom D.
1974 Late Quaternary bison population changes on the Southern Plains. Plains Anthropologist 19 (65):180-196.

Doehner, Karen, Duane Peter, and S. Alan Skinner
1978 Evaluation of the archaeology of the proposed Cooper Lake. Southern Methodist University, Department of Anthropology, Archaeology Research Program, Research Report 114.

Eastern Texas Gazette, Marshall, Texas
1857 Article concerning Jefferson's importance as a inland port to the surrounding areas, March 14.

Fleker, Bud
1981 Personal communication. Avinger, Texas.

Ford, James A.
1951 Greenhouse: A Troysville-Coles Creek period site in Avoyelles Parish, Louisiana. Anthropological Papers of the American Museum of Natural History 44(1):1-132.

Garrison, E.G.
1977 Modeling inundation effects for planning and prediction. In Conservation Archaeology, edited by M.B. Schiffer and G.J. Gumerman, pp. 151-156, New York: Academic Press.

Gibson, J.L.
1969 Archaeological survey at Caddo Lake, Louisiana and Texas. Southern Methodist University, Contributions in Anthropology 6.

Goldschmidt, W.R.
1935 Some archeological sites in Titus County and their relation to east Texas prehistory. Unpublished M.A. Thesis, The University of Texas at Austin.

Grady, Mark A.
1978 Considerations of the Texas Archaic interaction sphere. Paper presented at the 43rd annual meeting of The Society for American Archaeology, Tucson.

Gregg, Josiah
1952 Diary and letters of Josiah Gregg. (Vol. I, II). The University of Oklahoma Press, Norman.

Griffin, J.B.
1961 Relationships between the Caddoan area and the Mississippi valley. Bulletin of the Texas Archeological Society 31:27-36.

Hayner, E.W.
1957 Three Archaic sites in east Texas. Bulletin of the Texas Archeological Society 28:169-80.

Hsu, D.P.
1969 Appraisal of the archeological resources of Titus County Reservoir, Titus, Camp, and Franklin Counties, Texas. Texas State Building Commission and Texas Water Development Board, Archeological Survey Report 4.

Hsu, D.P., J.V. Sciscenti, and S. Alan Skinner
1969 Appraisal of the archaeological resources of Big Cypress (Franklin County) Reservoir. Texas State Building Commission and Texas Water Development Board, Archeological Survey Report 3.

Hyatt, R. D. and H.P. Mosca, III
1972 Survey of cultural resources of the proposed Big Pine Lake, Texas. Southern Methodist University, Archaeology Research Program, Research Report 15.

Jackson, A.T.
1931 Manuscripts on file at the Texas Archeological Research Laboratory, Austin.

1934 Manuscripts on file at the Texas Archeological Research Laboratory, Austin.

Jelks, E.B.
1961 Excavations at Texarkana Reservoir, Sulphur River, Texas. Bureau of American Ethnology, Bulletin 179, River Basin Surveys Papers 21.

Jelks, E.B., and C.D. Tunnell
1959 The Harroun site, a Fulton aspect component of the Caddoan area, Upshur County, Texas. The University of Texas at Austin, Department of Anthropology, Archaeologv Series 2.

Johnson, L., Jr.
1962 The Yarbrough and Miller sites of northeastern Texas, with a preliminary definition of the LaHarpe aspect. Bulletin of the Texas Archeological Society 32:141-284.

Jones, B.C.
1968 The Kinsloe focus: a study of seven historic Caddoan sites in northeast Texas. M.A. Thesis, University of Oklahoma.

Judd, Sharon
1981 Personal communication. Environment Consultants, Inc., Dallas, Texas.

King, T.F.
1978 The archeological survey: methods and uses. Department of the Interior, Heritage Conservation and Recreation Service, Cultural Resource Management Studies.

Kreiger, Alex D.
1946 Culture complexes and chronology in northern Texas. The University of Texas, Publication 4640.

Lale, Max
1981 Personal communication, Marshall, Texas.

Lenihan, D.I., T.L. Carrell, T.S. Hopkins, A.W. Prokopetz, S.L. Rayl, and C.S. Tarasovic
1977 The preliminary report of the National Reservoir Inundation Study. U.S. Department of the Interior, National Park Service, Southwest Cultural Resources Center, Santa Fe.

Lovis, William A.
1976 Quarter sections and forests: an example of probability sampling in the northeastern Woodlands. American Antiquity 41(3):364-372.

Lynott, Mark J.
1979 Prehistoric bison populations of northcentral Texas. Bulletin of the Texas Archeological Society 50:89-101.

McCormick, O. F.
1973a The archaeological resources in the Lake Monticello area of Titus County, Texas. Southern Methodist University, Contributions in Anthropology 8.

1973b Lake Swanano: an archaeological reconnaissance. Southern Methodist University, Archaeology Research Program, Research Report 22.

McCormick, Olin F., III, and M. L. Scott
1971 Lake Monticello archaeological projection interim report. Southern Methodist University, Archaeology Research Program, Research Report 13.

McGimsey, C.R., III, and H.A. Davis
1977 The management of archeological resources: the Airlie House Report. Special Publication of the Society for American Archaeology.

Mallouf, R.J.
1976 Archeological investigations at proposed Big Pine Lake, 1974-1975, Lamar and Red River Counties, Texas. Texas Historical Commission, Archeological Survey Report 18.

Miller, E.O., E.H. Moorman, and E.B. Jelks
1951 Archeological survey of Ferrell's Bridge Reservoir: Harrison, Marion, Upshur, Cass, Morris, Titus and Camp Counties, Texas. Manuscript, Smithsonian Institution, River Basin Surveys.

Munroe, Tom
1975 Architectural styles of Jefferson, Texas. Geography 501 Research Paper, North Texas State University Special Collection, Denton.

Newell, H.P., and A.D. Krieger
1949 The George C. Davis site, Cherokee County, Texas. Memoirs of the Society for American Archaeology 5.

Nichols, Pete
1981 Personal communication. Espey, Huston and Associates, Austin, Texas.

Northern Standard, Clarksville, Texas
1844 Article concerning the importance of Jefferson as an inland port for exportation of local commodities, October 23.

1854 Article concerning the impact of Jefferson as an inland port.

O'Pry, M. H.
1928 Chronicles of Shreveport. Journal Printing Company. Shreveport.

Ramsdell, Charles William
1970 Reconstruction in Texas. The University of Texas Press, Austin.

Scott, Thomas R., Michael McCarthy, and Mark A. Grady
1978 Archaeological survey in Cherokee, Smith, and Rusk Counties, Texas: a lesson in survey methods. Southern Methodist University, Archaeology Research Program, Research Report 116.

Shafer, H.J.
1975 Comments on Woodland cultures of east Texas. Bulletin of the Texas Archeological Society 46:249-54.

Shafer, H.J.
1976 Defining the Archaic: an example from the lower Pecos area of Texas. In The Texas Archaic: a symposium, edited by T.R. Hester. The University of Texas at San Antonio, Center for Archaeological Research, Special Report, 2:1-9.

Skiles, B.D., J.E. Bruseth, and T.K. Perttula
1980 A synthesis of the upper Sabine River basin culture history. The Record 36(1):1-12.

Skinner, S. Alan
1977 Review of Archeological investigations at proposed Big Pine Lake, 1974-1975, Lamar and Red River Counties, Texas, by Robert J. Mallouf. Bulletin of the Texas Archeological Society 48:155-158.

1979 The archaeology of east Texas lumbering. East Texas Historical Association Quarterly 17(1):36-44.

1981 Preadaptation for the Southern Cult in the Caddoan heartland. Louisiana Archaeology 6:207-221.

Skinner, S. Alan (assembler)
1981 Cultural resources survey of the Troup Mine, Texas. Environment Consultants, Inc., Cultural Resources Report 81-7.

Skinner, S. Alan and James E. Bruseth
n.d. The "Great Drought" in the Caddoan area. Unpublished article in preparation, copy on file Environment Consultants, Inc., Dallas.

Skinner, S. Alan, Jeffrey J. Richner, and Mary R. Johnston
1978 Dallas archaeological potential. procedures for locating and evaluating prehistoric resources. Southern Methodist University, Archaeology Research Program, Research Report 111.

Smith, Allie
1981 Personal communication. Omaha, Texas.

Smith, Edward
1850 Account of a journey through northeastern Texas undertaken in 1849. London: Hamilton and Williams.

Stearns, S.
1970 The R.A. Watts site, Camp County Texas. Unpublished manuscript on file at Southern Methodist University.

Story, D.A., and S. Valastro, Jr.
1977 Radiocarbon dating and the George C. Davis site, Texas. Journal of Field Archaeology 4(1):63-89.

Sullivan, T.
1977 Archaeological investigations at Lake Bob Sandlin, Texas. Southern Methodist University, Archaeology Research Program, Research Report 99.

Suhm, Dee Ann, Alex D. Krieger, and Edward B. Jelks
1954 An introductory handbook of Texas archeology. Bulletin of Texas Archeological Society 25.

Swanton, John R.
1942 Source material on the history and ethnology of the Caddo Indians. Bureau of American Ethnology, Bulletin 132, Washington.

Texas Almanac
1975 Texas almanac and state industrial guide 1974-1975. The Dallas Morning News, Dallas.

Turner, R.L., Jr.
1978 The Tuck Carpenter site and it's relation to other sites within the Titus focus. Bulletin of the Texas Archeological Society 49:1-110.

Turpin, Solveig, Joel Rabinowitz, Jerry Henderson, and Patience E. Patterson
1976 A statistical examination of Caddoan vessel design and shape from the Ben McKinney site, Marion County, Texas. Plains Anthropologist 21(23): 165-179.

Webb, Clarence H.
1948 Caddoan prehistory: the Bossier focus. Bulletin of the Texas Archeological and Paleontological Society 19 :100-147.

1959 The Belcher Mound, a stratified Caddoan site in Caddo Parish, Louisiana. Memoirs of the Society for American Archaeology 16.

1960 A review of northeast Texas archeology. Bulletin of the Texas Archeological Society 29:35-62.

Webb, C.H., F.E. Murphy, W.G. Ellis, and H.R. Green
1969 The Resch site, 41HS6, Harrison County, Texas. Bulletin of the Texas Archeological Society 40:3-106.

Webb, C.H., J.L. Shiner, and E.W. Roberts
1971 The John Pearce site (16CD56): a San Patrice site in Caddo Parish, Louisiana. Bulletin of the Texas Archeological Society 42:1-49.

Webb, W. P., and H. B. Carroll
1952 The handbook of Texas (Vol. I, II). The Texas State Historical Association, Austin.

White, Dabney, (editor)
1940 East Texas: its history and its makers. Lewis Historical Publishing Company, New York.

White, Wayne Rogers
1964 The historical geography of Marion County, Texas, 1830-1890: an example from the era of steamboat navigation on inland waters. M.A. Thesis, The University of Texas at Austin.

Whitsett, Haden
1977 An archaeological reconnaissance at Hallsville, Harrison County. Texas Department of Water Resources.

1981 Personal communication. Texas Water Resources Board, Austin.

Woodall, J. Ned
1981 Survey methodology: a different perspective from the Carolina Piedmont. Newsletter of the Southeastern Archaeological Conference 23 (1-2).

Wyckoff, D.G.
1971 The Caddoan cultural area: an archeological perspective. University of Oklahoma, Oklahoma Archeological Survey.

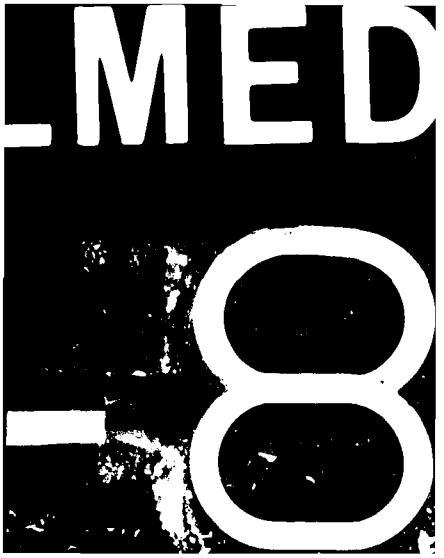
APPENDIX A.

LOCAL NEWSPAPERS

*	Confederate News	Jefferson, Texas
*	Daily Jimplecute	Jefferson, Texas
*	Eastern Texas Gazette	Marshall Texas
	Jefferson Weekly Times and Republican	Jefferson, Texas
	Jefferson Radical	Jefferson, TExas
	The Journal	Jefferson, Texas
	Marshall News Messenger	Marshall, Texas
*	Northern Standard	Clarksville, Texas
	Semi-Weekly Jimplecute	Jefferson, Texas
	The Sun	Linden, Texas
	The Republican	Marshall, Texas
	Weekly Jimplecute	Jefferson, Texas

Papers on file at the Barker Texas Historical Center at The University of Texas in Austin and the Stephen F. Austin Branch of the Texas State Archives.

* Referenced in Text.


LMED
8